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Fruit and Vegetable Canning in Maryland.

The elaborate cyclopedia of Maryland, recently published by the World's Fair managers for that State, contains an extended account of the truck-farming interests of Maryland, from which we take the following extracts, dealing more particularly with the canning of vegetables and fruits and their production for this purpose:

"Maryland has been the leading State and Harford the leading county for this industry until 1891, when, from various causes and partly on account of variable seasons, New Jersey took the lead, to yield it again, however, in 1892.

"The largest yield of tomatoes was in 1888, when 968,733 cases were put up in this State alone, each case holding two dozen cans. In that same year there were over 1,000,000 cases of corn put up in the State, although this figure is far in excess of the production in subsequent years.

"In Harford county there has been a larger area planted in tomatoes for canning purposes than in any similar extent of territory in the United States, and this industry has replaced, to a large extent, the cultivation of the old staples, wheat and corn. Tomatoes and corn are the principal crops in these northern counties; in the southern counties and on the Eastern Shore, peas, beans, strawberries, peaches and cherries are extensively raised for canning.

"A greater part of the tomato crop and nearly all the corn crop is packed by local canning houses, although when the peach crop is short many of the city packers turn their attention to tomatoes. As a rule, the other vegetables and fruits are shipped to the cities for canning.

"As there is no particular purpose in having the crop intended for canning mature early, the yield and quality of the crop is of more importance, and the soils are selected with reference to these particulars. The lighter soils of the gneiss and gabbro formations are selected for this purpose because they are easier worked and the crops mature better than on the heavier lands.

"The bulk of the pea crop is grown in Anne Arundel county. In 1892 365,000 bushels of peas were canned from this one county, as estimated by the Canned Goods Exchange, and this is a low estimate, for it does not include the product of the local canning factories.

"The production of fruits did not exist in this State as a separate industry before 1830. At this time there were only a few peach orchards adjacent to Baltimore city, and the cultivation of strawberries was confined to small areas in market gardens. About this time, however, a Mr. Cassidy came from Philadelphia and bought 300 acres of land in Cecil county, and put out the first large peach orchard in the State, except those in Anne Arundel county supplying the local Baltimore market. Mr. Cassidy sold his crops in Philadelphia for excellent prices, and this stimulated the growing of peaches on the Eastern Shore, and the industry spread with great rapidity. By 1840 the peach crop exceeded the market demands, and there was a glut in the market, the crop bringing the lowest

prices which have ever prevailed. This demoralized the peach-growers, and many orchards were subsequently rooted up. About this time, however, the canning interests sprang up, and not only relieved the market at that time, but it has constantly and steadily increased the demand.

"The peach interest is at present confined to the Eastern Shore, southern Maryland and to the mountains in the far western part of the State, which latter has been treated of in another place.

"There are few peaches now grown in Cecil county, where the industry was introduced into the State, or in the northern central counties, as peaches do not do well on these heavy gabbro and gneiss soils.

"The peach interest has been steadily moving southward on the peninsula for some years back. About forty years ago the 'peach yellows' seriously crippled the peach industry in New Jersey, and this disease has been gradually spreading southward and has destroyed many of the orchards in Delaware and in the northern counties on the Eastern Shore, but it is not felt at all in the southern counties of the peninsula.

"The Eastern Shore counties rank in the importance of the peach industry about as follows: Kent, Queen Anne, Caroline, Dorchester, Talbot, Wicomico, Somerset and Worcester. But the industry is rapidly extending in the lower counties, and it is believed that before long this will be the great peach-producing area. In southern Maryland the industry is very extensive in Anne Arundel, Calvert and St. Mary's counties.

"It is impossible to get exact figures of the total peach crop, as the crop is shipped in such various ways. The most trustworthy estimates, however, place the average crop of the peninsula, including Delaware and the Eastern Shore counties of Maryland and Virginia, at 2,000,000 bushels, although it has at times reached double this amount, and has been almost a failure in other years. The mountain peach industry has an advantage over the lowland crop in that the mountain crop is seldom, if ever, a failure, while the lowland crop is very frequently injured by late frost. The two crops do not conflict, as the mountain peaches come in after the lowland crop is over and bring an excellent price.

"Before 1830 strawberries were confined to small patches in market gardens near the cities. Between 1830 and 1840 a Mr. Crisp came over from Kent Island and put out a large strawberry bed in Anne Arundel county, not far from Baltimore. He shipped the berries to Philadelphia and got an excellent price for them, and these were probably the first berries shipped from the State. The interest thus started spread rapidly, and it is estimated that in 1892 no less than 1,000,000 quarts of strawberries were shipped to Northern and Western markets from Anne Arundel county alone, besides a large quantity consumed in the Baltimore market. The introduction of the refrigerator car has widened the market for strawberries enormously. Four tons of ice are put into these cars, and the berries can then be shipped to Canada and opened in almost as good condition as when they left home, and the cry of 'Ann Aranel' strawberries is about as familiar and as welcome in Montreal as

it ever has been in the Baltimore markets.

"The crop is shipped direct by the producer to New York, Boston, Canada, Pittsburgh, Cleveland, Cincinnati, and to all points reached by a single railroad system, where the cars can be billed through and run on a fast freight schedule. In this way they can be sent by fast freight about as quickly and usually for about half the cost as when sent by express.

It is interesting to note the way the direction of shipments changes as the season passes. Early crops come to the Baltimore market, or pass through it from the South, in successive crops from Florida, South and North Carolina and Virginia, and then, when our own crop is passed, berries are shipped here from New York and other Northern points; so the crop goes up the coast and back once in a season, and the intermediate points have both a Northern and Southern trade.

"The strawberry interest is greatest in Anne Arundel county, although it has lately assumed large proportions in Baltimore and some of the other northern counties. It has been taken up with great interest in all the Eastern Shore counties, especially in Wicomico, Caroline and Somerset. The admirable railroad and water facilities on the Eastern Shore, together with the peculiar nature of the land, adapt this region particularly to the fruit and truck interest.

"Pears have not been grown to any very great extent as a special industry in this State, but of late years the interest has been increasing. This is the case especially on the Eastern Shore, where pears are replacing peaches to a very considerable extent in the northern counties. It is said that the blight, which has been very destructive in other parts of the State, gives little trouble on the Eastern Shore, and that where it does occur it yields readily to treatment.

"Wild blackberries grow very abundantly in southern Maryland and on the Eastern Shore, and this is even now a very important industry in the State. The first attempt at planting the improved varieties was in Anne Arundel county about 1855, shortly after the introduction of the Lorton berries had aroused an interest in the culture. The cultivation of blackberries is an important industry in Anne Arundel and Baltimore counties, and in Caroline, Wicomico and upper Eastern Shore counties.

"Raspberries are cultivated quite extensively in Anne Arundel county, principally for canning and preserving.

"The canning industry has greatly increased the demand for fruits and vegetables, and has increased the value of the crops. Thirty years ago fresh berries usually sold in Baltimore for about one cent per quart. They now bring five or ten cents per quart, and even more. Peaches retailed at about ten cents per peck, but now average about thirty cents. Peas brought about forty cents per bushel, and now bring on an average about \$1.20 per bushel."

MR. JOHN C. LEIB, treasurer of the Northern Central and Baltimore & Potomac Railways, died in Baltimore September 19, aged sixty-nine years. He had been connected with the Northern Central for forty years.

Louisiana's Sugar Industry.

[From the New Orleans Times-Democrat.]

The sugar industry is one of the distinctive features of Louisiana. It is the sugar State of the Union par excellence, and has always been so, and none of the others can even compare with it in production. The sugar industry was in a thriving condition before the civil war, when Louisiana was increasing its production every year and promised to soon furnish all the sugar the country needed. The war crushed it.

The levee system, which guarded almost the entire sugar district, was ruined and broken in every direction. A large number of the sugar-houses had been burned, wrecked for their metal or had fallen from decay. The greater part of the sugar district had been allowed to run out of cane, and there was a woeful lack of capital in the State to even begin the work of resuming sugar production.

Under these circumstances, regarding the restoration of the industry as a hopeless task, the proprietors of a large part of the former sugar fields abandoned sugar culture entirely. They did this without regret, as cotton seemed then by far the more profitable crop. It was one which required the expenditure of far less money in its cultivation, harvesting and preparation for market, and it was one in which the sugar lands could be seeded at once, while, at least, three years were required for restoring the lands in cane.

After the war there was a slight revival in the industry on account of the high price that sugar commanded. From that period until four or five years ago the sugar business was very fluctuating, one year profitable, the next returning very little profit. The planters suffered from overflow due to defective levees, to storms and freezes and often to the tariff agitation, which affected the price of sugar from year to year. A few years ago, however, there was a revival which has been intensified by the bounty laws. The levees generally were put in better condition, so that overflows were infrequent. The United States Weather Bureau did the planters good service also. In former days a freeze had often come upon them almost unexpectedly and destroyed a large portion of the cane or rendered it adapted to manufacture of molasses alone. Now the planters receive a warning of two or three days, which enables them to save the cane. Moreover, the cultivation of the cane and manufacture of the sugar have both greatly improved. The more general use of fertilizers secured a larger tonnage to the acre, while the improved machinery, which extracted more of the juice and consequently of the saccharine from the cane, doubled and trebled the number of pounds of sugar secured per acre. This result was largely brought about by the placing of more capital in the industry.

The last few years have seen a complete change in the sugar industry, and for the better. The large plantations are growing larger by absorbing neighboring ones, or the small planters abandon the manufacture of sugar altogether and sell their cane to the refineries or central factories. The disposition is thus to separate two industries which have hitherto been united—agriculture and manufacture.

The old system was bad, expensive and

troublesome. The sugar planter was not only a farmer, but a manufacturer, and this bothered the census department so much that it has never known how to class the output of the sugar-houses, one year (1870) classing it among the manufactured product and another (1880) as among the farm produce. To carry on the business the planter had to be both a farmer and a manufacturer. He had his farm to cultivate and the cane to raise, and his force of skilled mechanics and chemists, employed only a few months of the year, to manufacture the sugar. It can readily be seen what a burden and expense this has been to him, and how much better it would have been to him to separate the two—to raise the cane and let some factory well and fully equipped with the best machinery and with a force of men especially suited for the business manufacture the sugar from it. Moreover, it took a large amount of capital to equip a sugar-house, which kept the smaller farmers out of the business and even restricted the operations of the larger ones, who had put so much of their capital into machinery.

For some years past a considerable portion of the cane crop of the smaller planters has been manufactured into sugar by the large sugar-houses and refineries. The most thorough experiment in the way of a central sugar factory was that made with the Caffrey factory at Franklin. Its success was so great that the factory was considerably enlarged the year after its construction, its production being doubled.

It obtains its supply of cane by means of barges running in the Teche and railroad lines extending in all directions through the sugar district.

Several other central factories are proposed, and a few years of prosperity of those now in existence will undoubtedly bring about the construction of enough of them to convert the greater portion of the cane crop into sugar. This, it is believed, will induce the farmers to cultivate cane in southern Louisiana for sale, which would bring thousands of acres under cultivation and yield a handsome return.

The effect of the new movement in the sugar industry is seen in the greatly increased demand for improved machinery, giving a stimulus to the foundries in New Orleans, which, with few exceptions, report their business, particularly in the manufacture of sugar machinery, to be many times greater than ever before. Nor are the orders for machinery confined to New Orleans alone, but many of them have been placed in Philadelphia, Cincinnati and Louisville, and a considerable quantity imported from Europe—more than ever before, the average purchase of machinery being from \$2,500,000 to \$5,000,000 a year.

The increased crop has also greatly stimulated the cooperage business. The general change from packing the sugar in hogsheads to barrels has caused a demand for the latter, which at times has been so great as to give rise to the suggestion that the sugar be packed in bags as in Cuba.

The substitution of a bounty system for the old system of a duty on sugar was intended mainly to reduce the price of sugar to the people, and also to bring about its production at home, instead of depending upon foreign countries.

Sugar has become an article of prime necessity of late, and one of the most expensive in the family household. In deference to the popular demand for cheaper sugar Congress abolished the duty and thus reduced the price, but as this struck a blow at the home sugar interest, which was thus left completely unprotected, and the millions engaged in it threatened with ruin, Congress put on the bounty to protect it, and at the same time stimulate our production of sugar in the same way as that of beet sugar was stimulated in France.

Will it be possible for this country to produce the sugar it needs? The answer

to this depends mainly upon Louisiana. Some success has been encountered in the manufacture of beet sugar in California, and some sugar has been made from sorghum in the West, but less than expected, and some cane sugar is produced in Texas and Florida, but it is evident at the same time that the chief dependence of this country must be the cane sugar of Louisiana. What can this State reasonably expect to do? How much land has it got that can safely and profitably be cultivated in cane? It is estimated that even along the Mississippi not more than one-third of the acreage once devoted to sugar is now planted in cane, and there is besides this new land that can be planted in it. Better drainage, with a better system of levees, and the redemption of much land which is now considered swamp, will give Louisiana all the land for sugar it needs. Even without the addition of an acre of new land, by drainage or redemption, there is enough land on the sugar plantations that, if given up to cane alone, would assure a crop of 600,000 tons, a production which Louisiana may hope to reach in a few years, unless Congress begins again the policy which has proved so injurious to this industry of continually modifying and changing the sugar tariff.

It is probable also that the sugar culture will be greatly extended in this State. During the period of depression in this industry it abandoned some of its northern territory, and the Felicianas, Rapides and Avoyelles, in which considerable sugar had formerly been raised, gave up its cultivation altogether, or to a considerable extent. It is probable that these parishes will take it up again; indeed, the acreage in Rapides and Avoyelles has already been largely increased. The chances are also that it will seek new territory. Experiments in Tangipahoa show that the sugar cane does well there, and it will probably grow successfully in nearly all portions of the Florida parishes. The prairie regions of western Louisiana are well adapted to it, and it can and will be cultivated there with advantage by the farmers if they can be assured of a market for it; that is, if refineries or central factories are erected that will buy the cane and manufacture it into sugar.

Under the influence of the bounty the sugar crop last season was the largest ever raised in Louisiana, far exceeding any ante bellum product.

The sugar crop for 1892-93 aggregated 452,068,627 pounds of sugar, of which 88,268,995 pounds were made by the old process, and 363,999,632 by modern apparatus.

Factories using the old process obtained an average of sixty-one gallons of molasses per 1000 pounds of sugar, or an aggregate of 5,384,409 gallons.

Those which used the modern apparatus obtained an average of thirty-two gallons of molasses per 1000 pounds of sugar, or an aggregate of 11,641,588 gallons.

The total production of molasses was 17,025,997 gallons. The factories using the old process averaged 1111 pounds of sugar per acre, or 108 pounds per ton of cane. The average with modern apparatus was 2718 pounds of sugar per acre, or 150 pounds per ton. The average yield of cane per acre was eighteen tons. Total acreage of cane ground about 236,190 acres, or 3,504,408 tons.

There were 518 sugar-houses in operation, a decrease of fifty-four since 1891-92. This decrease is due to the fact that small planters find it more advantageous to sell their cane by the ton to large factories than to manufacture it into sugar themselves. Of the sugar-houses in operation in 1892-93, 495 used steam and twenty-three horse-power; 165 have ordinary open kettles, 170 open pans or steam trains, and 183 vacuum pans.

The 183 sugar-houses (the refineries in

New Orleans not included) using the vacuum pans produced 363,999,632 pounds of sugar, or 181,900 tons, and 11,641,588 gallons of molasses, being 1,987,976 pounds of sugar, 994 tons of sugar, and 63,615 gallons of molasses per sugar-house, while the 335 sugar-houses using the other processes produced 88,268,995 pounds of sugar, or 44,134 tons, and 5,384,409 gallons of molasses, or an average of 263,489 pounds of sugar, or 132 tons, and 16,073 gallons of molasses per sugar-house. The total production for the State was 452,068,627 pounds, or 226,034 tons of sugar, and 17,025,997 gallons of molasses.

The immense improvement made in the cultivation of sugar in Louisiana is shown in these figures, the old or open kettle system securing only 1111 pounds of sugar per acre, while the new process, centrifugals, etc., yield 2718 pounds, an increase of 150 per cent.

The encouragement of last year's crop has resulted in a considerable increase in the acreage planted in cane this year, so that the total acreage is 283,620, or greater than it ever was before. The estimates presented to the internal revenue bureau by the planters of the amount of sugar they expect to produce is 619,550,000 pounds. These estimates are always in excess of the actual yield, but as the crop is a particularly fine one, the best that Louisiana has seen for years, we may reasonably count on a total yield of 550,000,000 pounds, or 275,000 tons.

The bounty system has been in operation only two years. The first year the yield was 357,875,557 pounds of sugar, the second 452,068,627 pounds; the third promises to be 550,000,000, an increase of 61 per cent. If the crop keeps on growing at that rate it will be but a very short time before Louisiana produces enough sugar to supply the whole Union. The chief trouble is the lack of central factories and the fact that it takes so large a capital to purchase the machinery and embark in the sugar business.

One of the tendencies of the new system is to divide the sugar industry into two branches, the manufacturing and the agricultural. The number of operating sugar-houses as a consequence is constantly decreasing. There were 697 in 1891-92, 618 in 1892-93, and there are 561 applicants for bounty this year. At the same time the acreage is increasing, and the price paid for a ton of cane has improved from \$2.50 or \$3.00 delivered at the factory to \$4.00 delivered at the nearest railroad station.

It is estimated that from \$2,500,000 to \$5,000,000 a year is invested by Louisiana sugar planters in new machinery. They keep constantly up with the time, study the latest machinery and carry on their business on a thoroughly scientific basis.

An important change resulting from the improved methods in the manufacture of sugar is in regard to a by-product molasses. The better the sugar the worse the molasses. As a consequence Louisiana molasses, which formerly enjoyed a reputation throughout the world, is becoming more difficult to dispose of; indeed, much of it is getting quite a nuisance and planters are more or less bothered what to do with it. Year before last the centrifugal molasses got down to six cents a gallon, at which price it did not pay to send it to market. Much of it was given away; some of it was buried in tanks in hopes of an improvement in price, and some of it was dumped into the Mississippi and the Teche because the planters did not know what to do with it.

It has been proposed to manufacture it into rum, by which process some 8,000,000 gallons of rum can be manufactured, the materials costing very little. The difficulty about that is that it will require new machinery and some capital, and that it is a business with which the plant-

ers are but little acquainted. The manufacture of rum, however, will be tried this year, and if it succeeds it will probably come into general use as a means of utilizing low-grade molasses, and will make the rum product of Louisiana of some importance.

Another suggestion is that the molasses be used for fuel in place of coal. It burns readily if mixed with wood or woody fibre. If, therefore, it is sprinkled over the bagasse, the woody remnants of the cane left after the saccharine juice has been pressed from it, it will give as strong a fire as coal. It is calculated that it will sell cheaply at \$3.33 per ton, the average cost of Pittsburg coal delivered at the sugar-house. In this way the molasses would replace 50,000 tons of coal, and furnish enough fuel for all the sugar-houses and refineries in the State. This, however, while a plausible idea, is scarcely likely to go into practice.

The chances are that some of the places will still continue the manufacture of molasses, for the better quality of which the demand continues, and the price is fair—the Lafourche country has the reputation of producing the best molasses in the world—but that on the majority of the plantations molasses will be treated as a waste product not to be taken into consideration, and interfering with the great object of the planter to get as much sugar as possible from his cane.

Looking Towards Texas.

There are unmistakable signs on every hand pointing to the constantly-increasing interest in Southern property for investment purposes. In the search for desirable farm lands that will yield good returns upon their cost the South stands first as an attraction for home-seekers. An observant correspondent of the *Galveston News*, writing from Peoria, Ill., shows how the people of the North are looking towards Texas. He says:

"After several weeks spent in New York, Illinois, Missouri and Kansas, as well as talking with many people from Indiana, Ohio, Michigan and other States, I believe I can truthfully say that Texas has the call upon the country in the line of investments. As I have talked more especially of south Texas and the coast country to all inquiries, I can speak more accurately concerning the interest felt in that section than any other portion of the State, and when I say the outlook is encouraging I do not overstep the bounds of conservatism. Extravagant advertisements of the coast country have to a limited extent injured that fertile section in the minds of ultra pessimistic investors, but that class is more decidedly in the minority than were the anti-repeal Congressmen in the late silver contest.

"Through central New York there is what might be termed a fairly well-developed 'Texas fever,' and the coast country is decidedly on top. The financial situation is not the best, but the clouds are rolling away even more rapidly than the most sanguine hoped for, and dozens of persons have told me they would either visit or move to Texas during the latter part of 1893 or early in 1894. Here in the richest portion of Illinois Texas is in good form, and other Southern States are getting a share of the emigration. There is an opinion which is growing in proportions every day that Texas will enjoy the next great national influx of money and people, and thousands are preparing to be at the harvest.

"As all American growth is and has been made in plunges and the steady community stands still, Texas cannot stem the tide of rapid development when it once sets in, no matter how lustily the mossbacks will cry down the boom.

"Let me digress to say that the most interesting contortionist in handling lan-

guage I have ever met is the quiet, dignified man who thinks he is telling the truth when he says 'our community don't wish a boom.' Here in Peoria the increase in population has been greater in the last five years than it was for twenty years before, and the very best men in the town will tell you that Peoria is growing steadily. They mean to tell the truth, but are lying just the same. The heavy editorial writer will tell you in most finished English that his people don't wish a boom, and he is thoroughly honest. Go into the business office and tell the manager that you have a scheme or plan by which the circulation and business of the paper can be doubled in six months. Prove your plan to be feasible and see how quickly the gentleman will improve the opportunity. In Buffalo they talk steady, solid growth, when the advancement of the city has been almost miraculous, and few booms of the century have equalled that of the great eastern entrepot of the lakes. St. Louis is and has been having a great real estate boom for five years, and eight solid pages of real estate advertisements every Sunday in both the *Republic* and *Globe-Democrat* make the man who says St. Louis is growing steadily more than a fool. Cincinnati and New Orleans are the only large American cities which have enjoyed a steady growth, and God pity the communities which would follow either. As to that wonder of the ages—Chicago—there is no use to speak. Of course it is the result of 'steady growth.'

"The best evidence that the crazy financial scare has about subsided is that it is no longer the leading subject of conversation in hotels and other places where men gather to talk. The banks of New York are paying out cash instead of clearing-house certificates, mills are starting up, banks resuming and confidence again taking hold of the populace. In St. Louis a few days since \$265,000 in currency was received in taxes in one day, and what happens in St. Louis is occurring at other places. There must be at all times some pet place for the American people to favor with their surplus cash. It cannot be Florida or California, for both are overdone and are rivals of Texas. The silver States are not in a position to invite immigration and capital with any show of success. The Northwest has had its day and must take a rest after having built up a grand country and many superb cities in a brief space of time.

"The agricultural lands of the middle West are good property, but the chance for any decided advance is not alluring. I must agree with the hundreds with whom I have talked upon the subject, and they say 'Texas has the call.'

"I am sufficiently a Cleveland man to use his famous words, 'it is a condition and not a theory' that the people of Texas have to deal with. The American people travel in flocks, they go in bunches, and no pastures are so inviting as those of Texas. The Lone Star State, and especially that favored section known as the coast country, can grow with a bound during the next two years, but the visitors must be invited. The croaker can't get a bite. Silence may be golden, and still water may run deep, but I have always noticed that the crowd follows the band. A few people like solitude, but the multitude gathers on Broadway and State streets. In other words, if Texas desires to move this continent she must first move herself. Hustlers can raise the wind and come to the front, whatever legislation Congress may decide upon regarding currency and the tariff. This country will right itself in spite of what takes place in the capitol building at Washington, and from what I have gathered I believe Texas will get a majority of the benefit that will be the natural result of a distribution of capital which will follow closely upon the heels of restored confidence.

"In this section of Illinois lands, with

corn the principal crop, sell readily at from \$75 to \$150 per acre, and not one farm in one hundred will pay a net profit of 6 per cent. for a period of ten years, and the majority will not net even one-half that amount. The farmers have been made rich through the advance in the value of their lands, which has averaged, through twenty of the best counties in the State, 100 per cent. in the last decade, and still they tell you with honest candor that they have enjoyed no boom. I want to see Galveston and Houston grow like Buffalo and St. Louis, and if the surrounding country gets on a Chicago gait I will have no fear of the result.

"You can call it boom, or give the pace any name you care to select, but it is certain that the Empire State of the Southwest has the pole, and the track is extremely fast if the ribbons are in the proper hands.

"You hear favorably of Texas ten times today to where it was mentioned complimentary once five years ago. I know this to be the truth, for I have personally listened to the talk upon both occasions. The undeveloped resources of Texas are almost limitless in both extent and value, and once fairly before the public the capital will be forthcoming to make these hidden riches of value to mankind.

"It will take hard work to push Texas to the foreground, as it is no easy matter to induce people to go from the centres of population and wealth to the Lone Star State, but once get the general public interested and there will be a repetition of the great influx of population which converted the arid lands in southern California into the richest fruit and flower gardens of which America can boast.

"I have heard from the lips of disinterested people that Texas has the opportunity to arouse an interest in her future to an extent which will draw millions of capital and thousands of people. Texans who have visited the World's Fair will certainly bear me out in this statement if they take sufficient interest in the welfare of their State to investigate the general sentiment of the people upon the subject."

Southern Bills in Congress.

Thus far the South is not being left behind in measures presented in Congress for improvements at various points. Southern representatives are apparently urging the claims of their respective localities for recognition, and doing all in their power to secure appropriations for public buildings, etc. The following bills have been introduced at the present session for public buildings:

Georgia—Americus \$50,000.

Alabama—Selma \$75,000, Anniston \$75,000, Decatur \$40,000 and Florence \$40,000.

Kentucky—Mount Sterling \$50,000, Paris \$100,000.

Florida—Tampa \$200,000.

Tennessee—Morristown \$20,000, Bristol \$20,000.

Virginia—Portsmouth \$150,000.

Also a bill to authorize the construction of an additional story to the public building in Fort Worth, Texas; \$50,000 is appropriated.

Also to provide for the improvement of the building and grounds of the United States court and postoffice at Little Rock, Ark., at a cost not to exceed \$82,800, and a bill appropriating \$25,000 to establish a Marine Hospital at Florence, Ala.

Among the bridge bills are the following:

Authorizing the Texarkana & Fort Smith Railway Co. to bridge Caddo lake at or near Mooringsport, La., and Cross bayou, near Shreveport, La. A bill authorizing the same railroad to bridge the Calcasieu and Sabine rivers in the States of Louisiana and Texas, and to bridge Little river in the State of Arkansas.

To authorize the Fairmount Valley Railroad to construct bridges across the Hiwas-

see, the Tennessee and the Clinch rivers, Tennessee.

Making an appropriation of \$50,000 for the building and construction of a bridge over the north fork of the White Water in Ozark, Mo.

Southern Business Improving.

According to reports received by the *New York World* from most of the principal Southern cities, business in all is improving, and the outlook justifies the hopeful predictions which have already appeared in the *MANUFACTURERS' RECORD*. A summary of the principal reports is appended:

Baltimore, Md.—The condition of the commercial community has improved materially in the past week. The grain trade has been active all the week and prices have generally ruled in sellers' favor. The orders for wheat from Europe are said to be larger than could be easily filled. The milling demand has improved, as millers find their product moving out more rapidly since the cash embargo has been removed from the bank vaults.

Richmond, Va.—The business situation is improving, confidence is being restored and, with the prospect of the repeal of the Sherman act, there is every reason to believe that matters, financially and commercially, will soon resume their old-time prosperous conditions.

Wheeling, W. Va.—While the business of the city generally has not been as good the past season as usual, it has been exceptionally good in view of all that has transpired in the country at large. The outlook for a splendid fall and winter business is very bright.

Raleigh, N. C.—The trade outlook is improving, and is really encouraging. There will be good crops, and plenty of means provided to move the crops. Banks are well fixed, and have no trouble this year.

Wilmington, N. C.—The prospects are bright for good business. Crops are good, and have been raised at less cost than for several years. Cotton is coming in, and the advance in the price greatly helps the public feeling. There is no trouble about getting money for all demands.

Atlanta, Ga.—President Oglesby, of the Chamber of Commerce, said: "I feel that an era of safe business success is before us. The people will be conservative and business men will do a solid business. A community where purchasers as well as traders are silent is in good condition."

Savannah, Ga.—While the Savannah banks have not been seriously affected by the monetary stringency, they have nevertheless felt it, but now that the situation is changing rapidly industries promise to revive with a suddenness heretofore unknown.

Macon, Ga.—A remarkable change has come over Macon within the last ten days. Trade has improved considerably, and more money is in circulation than at any other time within the last two months.

Louisville, Ky.—Money has not only become more plentiful in the banks by the return of withdrawn deposits, but it has become more active. Banks have begun discounting new commercial paper to supply the wants of merchants and manufacturers, besides renewing old paper.

Chattanooga, Tenn.—The currency famine is about over and for the first time in many weeks New York and Chicago exchange is accepted by the banks at par. Marked improvement in trade is noted by jobbers, collections have materially improved and even in retail circles there is a marked improvement.

Birmingham, Ala.—The leading business men believe that the outlook for trade this fall and coming winter is fair for a considerably improved condition over the present. The coal operators are in pretty good spirits and say that trade this winter will be much improved. The iron men,

while they do not anticipate any big boom, think they will realize better prices than are offered at present.

Columbia, S. C.—This year's crop has been made at less expense than any heretofore produced. Cotton is bringing a higher price than last year and is now being rapidly marketed. Merchants do a conservative business, and there will be few failures. The outlook for trade is brightening.

Montgomery, Ala.—President M. H. Houghton, of the Commercial and Industrial Association, and the owner of several large plantations, says he has no fears about the business of Montgomery from now on.

Anniston, Ala.—The prevailing opinion is that the outlook is very bright.

Shreveport, La.—Business men and bankers report the cotton crop an average one. They say the trade outlook is fair.

Galveston, Texas.—Trade in general is looking brighter now than for the past three months. The price of cotton always depends on the size of the crop. Texas is 400,000 bales short this year and prices are up a little.

Fort Worth, Texas.—The trade outlook is very encouraging. Texas is in better shape today to transact business than is any other State in the Union. The financial condition of Texas is stronger now than on September 1, 1892.

Austin, Texas.—Bankers, without exception, say the stringency in financial circles is being eased off and there is a decided change for the better, with the outlook more promising than it has been for some months.

Jacksonville, Fla.—Talks with half a dozen bank officials and nearly twenty wholesalers and jobbers in various lines show a decidedly hopeful feeling as to the business of the coming fall and winter.

Jackson, Miss.—Interviews with merchants and bankers indicate an improvement in the general condition of business and finance in Mississippi.

Pensacola, Fla.—The large export trade in timber and lumber from this city is largely with England and other countries of Europe, and leading bankers and merchants here are of the opinion that the outlook for trade depends largely upon the action of Congress on the Sherman bill.

Nashville, Tenn.—The trouble is over and the improvement continues steadily. Confidence is almost completely restored.

Knoxville, Tenn.—Bankers say the outlook for an immediate increase of business is good. They are confident times will be better.

Norfolk, Va.—The financial panic has never yet reached Norfolk, the money received by the farmers for their truck having carried the banks over without any outside help.

Charleston, S. C.—There has been a great improvement in all financial circles and centres. Money is getting easier and general business is showing more life and is becoming more active daily in all the different departments of trade.

Little Rock, Ark.—Col. Jno. G. Fletcher, president of the German National Bank, says trade is reviving all over the South.

Helena, Ark.—The cotton crop in this section is fully 20 per cent. better than last year. A fair corn crop and a good hay crop are assured. With fair prices for cotton business will be most excellent. Merchants owe less money than last year, and the same is the case with farmers.

Jefferson City, Mo.—Manufacturers believe that the worst is now over and apprehend no further trouble.

Vicksburg, Miss.—There has been a tangible practical improvement. The future is promising and a lucrative business season is confidently expected.

Frankfort, Ky.—Notwithstanding the continued tightness of money, confidence is slowly being restored.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 139.]

A Prosperous Southern Line.

The annual meeting of the Nashville, Chattanooga & St. Louis Company, held at Nashville, resulted in the election of G. M. Fogg, J. S. Rogers, A. H. Robinson, J. E. Washington, L. H. Lanier, Jr., M. Burns, O. H. P. Belmont, J. Hill Eakin, E. L. Jordan, T. W. Evans, N. C. Collier, E. B. Wesley, J. G. Aydelotte and J. D. Pabst, directors. The directors re-elected J. W. Thomas, president and general manager; J. W. Ambrose, treasurer, and J. D. Maney, comptroller. The report shows that during the past year 810 miles of road were operated at an expense of \$3,139,450. The net earnings were \$1,992,374. Of this \$1,483,697 was paid out in interest, taxes, improvements and rental of the Western & Atlantic, leaving a balance of \$508,676. Compared with the report for the year ending June 30, 1891, the last report shows that the N. C. & St. L. is in an excellent condition. The net earnings for 1891 were \$1,754,068, showing a gain for 1892-93 of over \$200,000. The road enters Atlanta, Chattanooga and Nashville.

A New Alabama Line.

Sixteen miles of the Abbeville Southern road have been opened for business. This is a new short line running from Abbeville, in Henry county, Ala., to the Alabama Midland line. The junction is about six or eight miles south of Dothan, and has been named Abbeville Junction. The road will put on regular trains and make close connection with the Midland trains from and to Montgomery. The road was begun in June last, and its construction has steadily progressed despite the general business depression. The entire twenty-five miles surveyed will be completed by January 1.

The Confluence & Oakland.

The completion of the Confluence & Oakland road, which has been surveyed from Oakland, Md., on the Wheeling division of the Baltimore & Ohio, to Confluence, Pa., on the Pittsburg division of the Baltimore & Ohio, is assured by the fact that the Mountain Lake Park Association of Garrett County, Md., has voted to give \$10,000 towards the project. The new road is about thirty miles long and will shorten the distance considerably between Pittsburg and Baltimore, while it is expected to induce many residents of the former city to come to Deer Park, Mountain Lake Park and other Maryland summer resorts.

The Texas Central in Trouble.

The Farmers' Loan & Trust Co. of New York has obtained judgment against the Texas Central for \$4,015,528, and has levied upon a land grant to the road from the State, located in Erath, Shackleford and adjacent counties. The property is assessed at \$6,000,000. Morgan's Louisiana & Texas Line has also levied on the same property to recover \$761,992. The Texas Central extends from Ross to Albany, with one branch. It is 230 miles in length, and was sold at foreclosure sale in 1891, and purchased by a New York syndicate for \$750,000. The report for the year ending September 30, 1891, shows that the road earned \$37,346.83 less than it cost to operate it.

An Electric and Steam Railway.

The latest enterprise in Texas is a proposed railway between Houston and Galveston, Texas, which is to be used for both steam and electric motors. The passenger and express trains are to be hauled by electric motors, and the freight trains

are to be hauled by steam-power. According to the prospectus issued the road is to be built through land grants from property owners in the territory through which it is to pass. It is expected that the land will increase in value to such an extent by building the road that the company can pay for constructing most of the line by selling this land, which is to be given by the grantors in exchange for the stock of the company. F. L. Dana, of Houston, Texas, is one of the active promoters of the enterprise.

The Washington-Baltimore Road.

Slowly but surely the project of constructing an electrical railroad between Baltimore and Washington is progressing towards the point where the work of construction is to begin. In both cities lines are now being built towards points in the suburbs where it is thought the proposed line will terminate. The latest movement towards constructing the road was at a meeting held September 14 in Baltimore, at which representatives of the syndicate which now holds the franchise were present. This is known as the Elkins-Widener-Hambleton syndicate, and besides Messrs. Elkins and Widener, two prominent Philadelphia street-railway men and capitalists, includes T. Edward Hambleton, Charles E. Savage, David M. Newbold, Charles Calvert and Howard Munnikhuysen, of Baltimore. The syndicate represents fully \$10,000,000 capital, and at the meeting mentioned decided to send a corps of surveyors over the routes proposed between the cities and select the best one. Two terminal points, which are favorably considered, are at the end of Rhode Island avenue, Washington, and Edmondson avenue, Baltimore.

The authorities at Laurel, Md., have given the Washington & Baltimore Tramway Co., which it is understood is a portion of this syndicate, permission to survey lines through the village for an electric road.

A Southern Company May Build the Tunnel.

One of the greatest engineering feats ever attempted in this country will be the construction of the underground railway which it is proposed to build in New York city. Owing to the rapid growth of the city and the corresponding increase in population, the present system of surface and elevated lines is inadequate to transport the throngs of people from the business part of the city to the suburbs and other residential portions. An underground line seems to be an absolute necessity and the rapid transit commission of New York is now considering plans of that character.

In connection with the enterprise the Ryan-McDonald Manufacturing Co., of Baltimore, has become prominent through an offer to construct the road in three years if given a franchise. The commissioners have received assurances from this company that it is prepared to put up the required \$1,000,000 guarantee at once, and begin construction as soon as the franchise is awarded. It is learned that the Ryan-McDonald Company proposes to raise the necessary capital and assume all financial responsibility. It will issue construction bonds, and will move to New York city the tunnel plant now in operation in the almost finished Baltimore & Ohio Railroad tunnel in Baltimore.

The Ryan-McDonald Company made a careful survey of the route as laid out by the engineers of the board, and has found no mechanical difficulties which cannot be surmounted. It has forwarded to Chairman Steinway a full description of the methods employed in the Baltimore tunnel, where it encountered quicksands and subterranean springs. At the next meeting of the rapid transit board a representative of the firm

will appear before the commission to urge a prompt acceptance of its proposition. The underground railway as proposed would be nearly fifteen miles long, extending from the Battery to Harlem.

The Ryan-McDonald Manufacturing Co. is another large corporation which has found the South preferable to other parts of the country as a base of operations. It was formerly located at Watertown, N. Y., but found that the advantages of location in Maryland were so much greater that its entire plant was removed to South Baltimore at a large expense a few years ago. Here a large manufacturing town has been established, containing car shops, a bolt and nut factory and an extensive railway-construction plant, in all of which the Ryan-McDonald Company is more or less interested.

If the company secures this great contract, which is estimated to amount to \$50,000,000, it will be another triumph for Southern industries, while the attention of the North and West will be attracted more than ever to the spirit of enterprise which is so rapidly developing the South.

Southern Visitors to the Fair.

The increase of travel to Chicago within the last two weeks has been remarkable, and the Southern States are sending a large proportion of the visitors. Commenting on this the *Atlanta Constitution* says: "It is clear that the Southern people have not been in a hurry to go to the World's Fair. They seem to have waited for times to get easier, for money to be plentiful and for rates to get cheaper, perhaps. But it now seems that the rates are not getting much cheaper, and, in fact, that there will be no extreme warfare among the competing lines; and whether the times are getting easier or not, the traffic is picking up all along the lines, and many people from this region of the South are going to the fair before the close. Every now and then the railroad people in Atlanta report a spurt in the World's Fair traffic, and the trains are forced to go out of the city with extra sleepers and sleeping cars. For the past two or three days the traffic has been above the average, and the East Tennessee and the Western & Atlantic have both had a handsome business. Parties are being organized in other cities, and a large number of tourists have recently passed through Atlanta from Augusta, Charleston and Savannah."

Railway Y. M. C. A. Branches.

The influence of Young Men's Christian Associations on railway employees is a question that is interesting many prominent railway officials. What is termed the railway branch of the Young Men's Christian Association was organized but a few years ago. At present, however, there are 100 associations at prominent points between Maine and Idaho. Of these associations thirty-one occupy their own buildings, the balance occupying rented or partly owned quarters. All the association buildings are provided with libraries, reading-rooms, social-rooms, bathrooms, gymnasium-rooms, dining-rooms and temporary hospitals. Practical lectures, social receptions and entertainments of all kinds are frequently given. The library privileges are open to all railroad employees, other privileges being exclusively for members. There are now 25,000 members and the membership is rapidly increasing. Every railroad employee is eligible to membership. President Depew, of the New York Central, takes this enthusiastic view of the association's influence:

"The effect of the establishment of one of these societies is marked and immediate—the character of the service begins to improve and the men become steady and saving. This association does more in fitting men to fulfill their duties for the

safety of the public than all the patent appliances of the age."

In the South the Baltimore & Ohio and Chesapeake & Ohio have encouraged the work by contributing liberally to the society. Two railroad branches are maintained in Baltimore partly by the Baltimore & Ohio and Pennsylvania companies, and a fine building has been constructed at Clifton Forge, Va., principally by the Chesapeake & Ohio.

Baltimore Wants Cheaper Rates.

The Merchants and Manufacturers' Association of Baltimore has again brought up the question of better shipping facilities from Baltimore to the South. It is a question that has been agitated for a number of years, but thus far without success, for the reason that none of the Southern lines extend north of the Potomac river. One of the peculiar features of the railroad situation for a long time has been the fact that the Pennsylvania Company has practically controlled the approaches to Washington from the South, although the Potomac river can be easily bridged at several points near the city, and only a few miles of construction would enable the Richmond & Danville and the Atlantic Coast Line to have independent entrances into the city, while forty miles more of building would enable them to reach Baltimore, and thus add two great cities to their direct lines. It is possible also for close connections to be made with the Baltimore & Ohio, and thus form another competing line to the South. If the Baltimore & Ohio completes the extension, partly constructed, to Fairfax, Va., this could be easily accomplished by meeting the Richmond & Danville at that point. The Baltimore merchants claim that at present the rates to the South are too high, and that a discrimination exists in favor of other cities. They have asked for a reduction, which is now being considered.

There is no doubt that the Richmond & Danville and Atlantic Coast Line would both be greatly benefited by having independent lines into Washington, and that the competition thus established would place Baltimore in a far better position to secure Southern trade than it now is in.

The Texas Stock and Bond Law.

The railroad stock and bond law which has just gone into effect in Texas is intended to restrict the issue of railroad securities for the purpose of eliminating fictitious and dishonest values. The law did not take effect until ninety days after its passage. Meantime quite a number of roads made provision for liberal increase in obligations. Texas Central authorized the issue of \$2,000,000 of 6 per cent. bonds; Rock Island & Texas authorized bonds to the extent of \$20,000 per mile on all lines in the State, present and prospective; Texarkana & Fort Smith authorized \$25,000 per mile on road, actual and contemplated; Texas & New Orleans \$4,195,000 of bonds; Sherman, Shreveport & Southern \$6,000,000 of bonds, and others varying amounts. The roads during the interval between the passage of the law and its taking effect made legal provision for the issue of over \$25,000,000 of stocks and bonds.

Southern Railway Changes.

Henry Edmondston has resigned the general agency of the Georgia Railroad at Augusta, Ga.

The stockholders of the Roanoke & Southern, which is a branch of the Norfolk & Western, have elected F. H. Fries, of Winston, N. C., president; H. S. Trout, of Roanoke, first vice-president; Gen. John Gill, of Baltimore, second vice-president; Col. J. H. Spencer, of Martinsville, third vice-president.

S. C. Ray appointed traveling freight agent for the Queen & Crescent, with headquarters at Dallas, Texas.

Railroad Notes.

SUPERINTENDENT LANDRY, of the New Orleans, Fort Jackson & Grand Isle, says that trade is becoming very brisk along the line of his road. Three years ago it was opened; it did not carry fifty pounds of cucumbers during the season, while one day recently it carried 1100 barrels of cucumbers to New Orleans. Superintendent Landry also says that one farm alone on that line will ship 115 carloads of oranges this season. The road is only sixty miles in length.

The South Bound Railroad, which has passed into the control of the Florida Central & Peninsular, will be turned over to the new management on October 1. Stockholders of the Florida Central & Peninsular ratified the move at a meeting recently held in Savannah.

The Louisville, St. Louis & Texas Railroad Co. has resumed work on the construction of the switch from its main line to the Hawesville Coal Co., and the track is about completed. The coal company resumed operations last week, and this switch will enable it to increase its force of miners by sixty men, and increase the output of the mines 4000 bushels per day.

At the annual meeting of the Montgomery, Haynesville & Camden Hon. S. D. Bloch was unanimously re-elected president, and R. E. McWilliams, secretary and treasurer. The old board of directors, consisting of Messrs. J. T. Beck, L. E. Stan, R. E. McWilliams, S. D. Bloch and Dabney Palmer, were re-elected.

MOZART PARK in Wheeling, W. Va., is to be reached from the city by means of an inclined cable railway. An iron spool or drum forty-four feet in circumference and weighing sixteen tons is revolved by means of a steam engine. On this drum works a steel cable 2000 feet in length which pulls the cars up the ascent; they are carried down by gravitation, the speed, of course, being regulated by the cable.

DURING the great storm off the South Atlantic coast a train on the Savannah & Atlantic road, which extends from Savannah to Tybee Island, was caught on the island and the track washed out in several places back and front of the train. It was finally brought to the city by building a mile of trestle-work to a point where it could be loaded on lighters and taken up the Savannah river.

The Atlanta Traction Co. has secured the franchise and property of the Atlanta City Railway Co., and will hereafter operate it in connection with the traction company's lines. The addition to the traction system includes roads to Decatur, Edgewood, Kirkwood, East Lake and other suburban points. The franchise includes several streets on which no lines have as yet been constructed.

The State of Texas has won its suit in the case against the Galveston, Harrisburg & San Antonio road. The action was to recover 1,000,000 acres of land granted the company when it was chartered in 1870. The court held that the part of the road from Columbus to San Antonio was chartered in 1870, at which time the constitution of 1869 was in force, prohibiting the granting of land to railroads, and that, therefore, the company had no right to the lands. The case will be appealed.

The annual meeting of the Western Maryland Railroad Co. will be held in Baltimore October 18. Directors will be elected and annual reports received.

The steamship *Rappahannock*, the initial steamer of the new ocean line operated by the Chesapeake & Ohio, sailed from Newport News for Liverpool with a miscellaneous cargo of freight equal to 250 carloads. Included in her freight were 1275 hogsheads of tobacco, which is said to be the largest single shipment of tobacco ever made from a Virginia port.

FINANCIAL NEWS.**The Financial Situation.**

The principal feature of the week has been the amount of ready money in circulation. Most of the bank statements, particularly those of New York banks, show a remarkable increase in funds, although clearing-house certificates have been retired in small quantities. This has produced a very favorable impression in the bond market, and good securities have advanced in some cases five and six points. On the Baltimore exchange prices have risen for many Southern bonds and some stocks, showing that this kind of investment is regarded as excellent by people who have the money to invest. The fluctuations of Louisville & Nashville stock have caused an unfavorable reaction at times. This road is being attacked more strongly than ever by the "bear" element, and it is evident from the way in which even hints of strikes and other troubles are spread abroad and magnified, that some powerful influence is directing the movement against it. How much these attacks will cause the selling of large blocks of the stock remains to be seen. As yet the foreign shareholders have lost little confidence in it.

Reports elsewhere show the gratifying increase in business throughout the South, although it is not surprising to those who have closely followed the trade movement and observed the attitude of Southern financiers and merchants during the last six months. While the increase is very substantial, merchants are acting very conservatively in placing orders, and not extending their credit any further than absolutely necessary. The bank suspensions in the South have practically ceased, and in their place come reports of banks resuming with capital unimpaired. As another illustration of the confident feeling towards banks, it is only necessary to cite the resumption of the First National Bank at Nashville, Tenn., which received \$400,000 in deposits, 40 per cent. of its entire capital, the first day it reopened for business.

The question of shipping the cotton remains unchanged from last week. Not the slightest difficulty has been experienced thus far in raising the necessary funds, and the alarmist theories advanced some weeks ago in reference to cotton shipments and the South's inability to handle them appear to be completely refuted.

Banks Resuming Business.

It is reported in Birmingham, Ala., that a majority of the stockholders and creditors of the First National Bank favor the reopening of the bank at once. It is stated the bank's condition is such that it can reopen as soon as the proper action is taken.

It is announced that the First National Bank of Winston, N. C., has reopened for business with J. C. Buxton as president, and J. G. Miller, cashier.

It is expected that the People's National Bank of Winston, which suspended a few weeks ago, will resume payments in a few days.

The People's National Bank of Winston, N. C., is about to resume business, as it has been found to be in a solvent condition.

New Financial Institutions.

A movement is under way to organize an insurance company in Charlotte, N. C. It is stated that manufacturers and merchants pay \$60,000 annually in premiums, and that the rates are too high.

The Security Life Insurance Co. has been incorporated at Richmond, Va., for the purposes named in the title, with a capital of \$25,000.

A branch of the Industrial Savings &

Loan Co. of New York has been organized at Roanoke, Va., with R. H. Woodrum, president; George L. Stevens, vice-president, and J. F. Wingfield, secretary and treasurer.

Philip Jacobs, Leon Wolff and others have organized the Washington State Bank at Washington, La., with \$50,000 capital. J. P. Russell is to be president; Leon Wolff, vice-president, and G. W. Curtis, cashier.

New Bond and Stock Issues.

The associated banks of Greenwood, S. C., propose to issue \$20,000 in certificates to be used as temporary currency, provided the government exempts the certificates from taxation.

The treasurer of Wayne county, Miss., has sold \$10,000 worth of 7 per cent. bonds to the Capital State Bank of Jackson.

The bondholders of the Asheville (N. C.) Street Railway Co. will sell \$100,000 worth of 6 per cent. bonds to pay the present indebtedness and have a balance for improvements, etc.

The city council of Dallas, Texas, has authorized the issue of \$50,000 worth of bonds for municipal purposes. Dallas has about 40,000 population and a debt of \$2,024,600 on an assessed property valuation of \$32,000,000 real and personal.

The city of Galveston, Texas, contemplates issuing \$1,005,000 40-year 5 per cent. gold bonds, to be redeemed at any time after twenty years. These bonds are to provide for an additional water supply, etc. An ordinance favoring the issue is now pending in the city council.

Bonds to the amount of \$175,000 will be issued for constructing water works and an electric-light plant at Hillsboro and another Texas city. John D. Fredd, at Hillsboro, will give information.

Duval county, Fla., wants bids on \$50,000 worth of 5½ per cent. bonds issued to pay for improvements in St John's river. They are to run twenty years, and are a debt on the taxable property of the county, which is assessed at \$8,801,709, and has no other funded debt. Charles H. Smith, Jacksonville, Fla., may be addressed.

Dividends.

The Mutual Loan & Building Co. of New Orleans, La., has declared a semi-annual dividend of 4 per cent. on its capital stock.

The assignee of the Security Savings & Trust Co. of Kansas City has paid creditors a dividend of 10 per cent. on the amount of deposits.

The directors of the Baltimore City Passenger Railway Co. have declared a quarterly dividend of \$1.00 per share on the original issue of 40,000 shares, which is equal to 4 per cent. for the three months. The dividend for the entire year will amount to over 12 per cent.

H. Kerr, receiver of the First National Bank of Brady, Texas, has declared a dividend of 40 per cent. to the creditors.

Failures and Suspensions.

William J. O'Brien has been appointed receiver of R. R. Zell & Co., iron manufacturers at Baltimore, Md. The assets are estimated at \$5000.

The Georgia Loan & Trust Co. has been placed in a receiver's hands. It has a capital of \$100,000, and has been operating at Savannah. Most of the stock is held by the president, William Falconer, who is charged with mismanagement. The company has been paying 8 per cent. yearly dividends.

It is reported that the Morotock Fire Insurance Co. of Danville, Va., has decided to suspend business, and W. W. Waddill has been placed in charge of its affairs. It had a capital of \$180,000 and a surplus fund in 1892 of \$6300.

OPINIONS OF THE DAY.**What Various Authorities Think of the Business Situation.**

Financial Chronicle: "Probably the most important feature is the improving condition of money all over the country. At this centre our banks gained again largely in reserve, according to their report last Saturday, and have made a further important addition the current week. Rates for time loans, too, have grown easier, and so have the rates for commercial paper, the promise being that this tendency will continue to broaden and develop."

Hambleton & Co.: "The situation continues to improve, and the effects of the recent panic are rapidly passing into history. The restoration of confidence, the retirement of clearing-house certificates, the disappearance of the premium on currency, the increase in bank reserves and decrease in loans, the reduction of discount rates, the ability of the banks to lend money on time, the refusal of savings bank depositors to withdraw their deposits at the expiration of the time limit, the improvement in values and the confident feeling which now prevails is due to the fact that the people are convinced that Congress will undoubtedly repeal the Sherman silver act of 1890."

Bradstreet's: "The stimulated demand for staples at prominent cities in the Ohio and Mississippi river valleys remains the feature of the business week. In other respects there has been no real gain within a week, and the long-drawn-out indifference of the Senate to the wishes of an enormous majority of the business community has had a depressing effect on the commercial situation."

London Commerce: "The steady and increased demands, however, for American bonds of the gilt-edge order are becoming more numerous, and, in spite of the liquidations in many quarters, the upward movement has set in for the better class of securities in a very business-like way. The public are eager to join in, but the want of confidence felt everywhere is an obstacle which time alone can overcome."

Henry Clews: "The recovery of the market is obstructed by the needless delay of the Senate in confirming the action of the House on silver repeal."

Southern Bank Changes.

Buena Vista (Ga.) Loan and Savings Bank.—James M. Lowe elected president and J. W. Roberts, cashier.

Wilmington, N. C.—Atlantic National Bank, W. J. Toomer, cashier, succeeds H. W. Howard.

Louisville, Ky.—Second National Bank, J. M. McKnight, vice-president; C. C. McCarthy, cashier.

Greenville, Miss.—First National Bank, Thomas Mount, cashier, resigned.

Financial Notes.

THE banks in Charleston county, South Carolina, this year will pay State taxes on about \$1,500,000 assessed value.

STOCKHOLDERS of the Kentucky National Bank of Louisville will consider the proposed reduction of the bank's capital stock at a meeting to be held September 26.

THE Central Passenger Railway Co. of Baltimore will redeem twenty-one of its 6 per cent. bonds in October.

THE commissioners of Chatham county, Ga., have been authorized to secure a loan of \$10,000 to meet current expenses.

AMONG the receivers' dividends noted in the last number of the *MANUFACTURERS' RECORD* was one by the People's National Bank of Winston, N. C. It should be understood that the People's Bank is not in the hands of a receiver, but closed its doors temporarily, as did many other financial institutions, simply because it could not realize on good paper.

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BALTIMORE, SEPTEMBER 22, 1893.

THE way in which an article clipped from a newspaper by an exchange goes the rounds of the press miscredited and uncredited is frequently very amusing. In its issue of September 15 the MANUFACTURERS' RECORD published a detailed account of proposed extensions and improvements to be made in the South by the Richmond Terminal management. A part of the article was reprinted by the Kiernan News Agency without giving this paper credit. The New York *Financial News* published the extract, crediting the Kiernan bureau. The *Journal of Finance* published it without credit, and a day or so ago most of the article appeared in the *Daily Railway Times*, of New York, as a special dispatch from Richmond, Va. The MANUFACTURERS' RECORD has special facilities for obtaining fresh and accurate information about railway matters which its contemporaries evidently appreciate.

KANSAS farmers are in a tight place because the Eastern money-lenders will not extend their mortgages on Kansas farms. The Provident Trust Co., one of the largest Eastern companies in this business, recently sent this notice to its agent in Great Bend, Kans.:

We are closing all our Kansas business as fast as loans mature, and an extension is out of the question. Most all companies doing business in Kansas are pulling out as fast as they can—not for want of business, but for reason that the legislation, sentiment and general antagonistic feeling toward a loan company is vicious and vindictive. Kansas loans will not sell in the East because the confidence in them is all gone.

Without doubt a great amount of money will be withdrawn from the West both on account of the reasons given by the company quoted above, and because of the disturbance of confidence by the recent panic in the West. All of this money must find investment elsewhere, and the South ought to receive a large share of it more than ever before.

The Cherokee Strip Opening.

The opening of the Cherokee strip for settlement presents a spectacle that can hardly be comprehended by those who consider the matter from a distance and in an entirely disinterested manner. Here is a vast area of virgin soil, subject to dry seasons that reduce everything to powder, torrid weather in which the

temperature rises to that of a Turkish bath, and devoid of any special attraction, save fertility and the fact that the land can be had without price. Under these circumstances thousands of settlers flocked to the borders of the strip, awaiting the hour on which the land was opened for settlement, and then came the race for choice locations. Thousands and thousands of people scrambled into the strip in a chaos equal to that of a charge of cavalry in battle, and in the wild stampede scores of people were maimed or killed, either in accident or at the hands of companion boomers.

It is difficult to comprehend the reason of all this. In fact, there seems to have been a marked absence of reason. Thousands of people rush to the strip, move their belongings in wagons, camp on the border and then risk their lives for the sake of a few acres of free land, which they will find hardly habitable before they reach the end of the first year. To say nothing of the labor, anxiety and risk of life and limb incurred by these settlers, the mere expense of their journey, their long waiting and their final entry was more than enough to buy them fertile and productive farms in a desirable section of the South, where the soil would yield a range of crops impossible in the Cherokee strip, where the climate would permit of continuous cultivation from one end of the year to the other, and where the settlers could enjoy social and educational privileges that will not be theirs for years in the locality they have chosen. The idea of free land is very seductive to the majority of the people, and to get a few acres of land for which they have to pay nothing directly they are willing to assume any risk and trouble and pay more than it would cost them to buy such land in infinitely more desirable localities. Thousands of people swarmed into the strip upon its opening and thousands dragged their weary way out of it again and sought their distant homes, disappointed and disgusted, but with a valuable lesson taught by experience.

The South has millions of acres of fertile soil that can be bought at less cost than that incurred by any one of the successful Cherokee boomers. As an object lesson in human nature the opening of the Cherokee strip has been a prodigious success; as a struggle of home-seekers to secure choice quarter sections under the impression that a slice of paradise would be theirs, it was a pitiful spectacle.

The Negro as a Mill Hand.

The possibility of securing a sure and steady supply of skilled labor with which to operate their mills is one of the problems that first presents itself to those who consider embarking in the cotton manufacture in the South. In nearly every instance the native white labor has proved suitable for all mill purposes. When the demand for cotton-mill help was much smaller than at the present time the supply was proportionately less, and manufacturers experienced more difficulty in securing enough help to run their mills than they encounter at the present time. The growth of the industry and the increased demand for labor have increased the supply, and, except in a few instances, manufacturers have little trouble in securing all the

help they need from among the local people in the South. In a few sections, however, and under certain extreme conditions, manufacturers find a great deal of trouble in getting the help they need. We do not believe, however, that the prospect of difficulty in this matter should prove an obstacle to any manufacturer who contemplates engaging in business in the South.

The greatest resource of the South is the enormous supply of cheap colored labor. The vast majority of the colored people are of value only as common laborers. In the cotton field, in the mines and in the lumber camps they are used to great advantage. Experience has proved, however, that colored labor is susceptible of training that will make it valuable for work that requires skill and intelligence. As yet there has been very little occasion to consider the adaptability of colored labor for cotton-mill purposes, because of the sufficient supply of white labor, but the possibility of a scarcity of white labor and the necessity for utilizing colored help give considerable interest to the consideration of the extent to which colored labor can be used. For the purpose of ascertaining the views of Southern mill managers on this subject, and to learn what has resulted from their experiences with colored labor, the MANUFACTURERS' RECORD has asked a number of mill presidents, managers and superintendents in the South to express their views as to the extent to which it is possible to utilize colored labor for spinning, weaving and other factory work requiring skill and intelligence. The answers, which we publish elsewhere in this issue, form a very interesting contribution to the discussion of the "negro problem."

At the outset the student of this question is inclined to condemn the colored help as incapable of training for cotton-mill purposes, but it will be seen from the views expressed by several managers of large experience that colored labor can be trained for almost any work in a cotton mill. The substance of the views of the majority is that in its present condition the colored labor of the South is totally unfitted for cotton-mill work, but under favorable conditions and with suitable training this labor can be utilized to good advantage. The cotton mill is not the natural field of work for the negro, nor was the primitive white man fitted for skilled labor; but it seems to be conceded by competent judges that training and discipline are all that is required to make good mill hands out of the colored folk.

Solid Southern Enterprises.

Readers of the reports as to the business prospects in the South published on another page of this issue cannot fail to note the general tone of commercial healthfulness which marks them all. Indeed, one might regard them as written by one person, so well do they agree on this point. It is only necessary to examine them carefully to tell that the South is "solid" in a financial meaning, and that the term can be applied to this section in the strongest sense of the word. From the present outlook the word "solid" can be applied to Southern bankers, merchants, manufacturers, farmers, miners and shippers for many years to come.

It is certainly remarkable that out of more than thirty of the largest business centers in the South not one reports a discouraging outlook, and that all, with possibly one exception, have felt the improved business situation already very perceptibly, for it must be remembered that many of the cities mentioned are comparatively isolated and among the last to be affected by the wave of prosperity which usually in times like these originates in the country's metropolis.

Take for example the Alabama cities. In Montgomery, President Houghton, of the commercial association, "has no fears about the business of Alabama from now on." At Anniston "the outlook is very bright." At Birmingham business men "believe that the outlook for trade this fall and coming winter is fair for a considerably improved condition over the present * * * coal operators are in good spirits * * * iron men think they will realize better prices." These reports come from a locality which has not only had the financial depression to resist, but had its great iron industries affected by the discrimination of freight rates against it, thereby shutting out much of its products from Northern markets.

But let us go a little further and take Arkansas. "The cotton crop is fully 20 per cent. better than last year. * * * With fair prices for cotton business will be most excellent. Merchants owe less money than last year, and the same is the case with farmers." Arkansas is still an infant in commercial development. It has a comparatively small population, with thousands of acres of its land unsettled, miles of territory rich in minerals still untouched, and only a few railway lines by which its people can reach the business world. In these respects it is behind many of the newly admitted Western States, which have been far more favored by immigration and the investment of Eastern capital. Yet, in spite of this, its condition is far more prosperous than some of its Western neighbors.

We have only analyzed the statements from sections where the worst was to be expected, and where reports such as given are an agreeable surprise. Georgia and Texas ought to make a good showing, and do so exceeding expectations. And the same might be said of the Virginias and Carolinas, the Mississippi States, Kentucky and Maryland, not a bank having suspended in the latter during the months of trouble. Norfolk, Va., never had any trouble, "the money received by the farmers for their truck having carried the banks over without any outside help," so reads the report, but we are aware of this remarkable fact from personal knowledge, as we have heard the same statement made by prominent Norfolk merchants within a few weeks. Is there a city in the country which can claim to be equally prosperous?

These reports are not a succession of "glittering generalities." Reasons are given. If the "outlook is bright" it is due to certain conditions. Frequently the reports are the consensus of opinions from different classes of trade experts.

The South is "solid" so far as regards actual values in enterprises, present and projected. The record of the past six months settles this fact beyond question.

CORRESPONDENCE

Deep Water at the Mouth of Brazos River.

VELASCO, TEXAS, September 10.

Editor Manufacturers' Record:

The progress made at the mouth of the Brazos river toward giving Texas and all the Southwest a new seaport deserves notice from the MANUFACTURERS' RECORD, especially as the great work has been carried on by home folks without one dollar's help from the State or general government, something that cannot be said of any other gulf or Atlantic port, real or prospective.

Less than four years ago the mouth of the Brazos was closed to commerce by a bar that the government engineers declared indestructible. While there was a first-rate deep anchorage in the roadstead, and deep water for largest ocean steamers in the river for a distance of six miles, and a continued unobstructed depth of sixteen to thirty feet for nearly thirty miles up stream, the depth on this bar was less than five feet at high tide.

After the government gave up the job of removing this bar a local company took hold of it.

During about nineteen months of actual work, often delayed by difficulty in transporting stone and other material from a distance, two jetties, each 5400 feet long, were built from the mouth of the Brazos out to a littoral current in the gulf, crossing the bar and ending in twenty-four feet of water.

This littoral current has always prevented the formation of a delta at the mouth of the Brazos and now keeps the bar from growing seaward beyond the jetties, as has been the case at the Rhone, in France, and some other artificial harbors where no such current existed.

The jetties narrowed the river's mouth to less than 600 feet, increasing the strength of the outflow and steadily scouring away the bar until a depth of nearly eighteen feet at high tide has been obtained over what remains of it. No dredging was done, though several hundred dollars were expended pulling out sunken logs and wrecks. These jetties cost \$1,300,000, all private funds, largely given by Velasco's citizens.

Twenty-four European steamships, drawing over fifteen feet, have entered and left the Brazos without delay or trouble during the past year. The deepest draft vessel to cross the bar and sail up the Brazos to Velasco was the schooner Henry P. Mason, Percy, master, of Bath, Me., with a cargo of coal from Pensacola, Fla. On her last voyage hither she drew seventeen feet four inches.

Wing dams upon the Eads plan are being built along the Brazos banks from the jetties to a point six miles up stream to straighten the channel and prevent cavings-in. Wing dams were also extended from the sides of the jetties, thereby holding the mud of the old bar, impacted with sand and the water pressure, and completely enveloping the jetties as a protection against storms. As the jetties have settled to the hard ocean floor, thirty to forty-two feet, through the sediment, they have been kept built up to a level with high tide. When this settling ceases a convex capping of concrete and granite, brought from New York and from Texas quarries, will be run on so as to offer a minimum of surface to wave force.

This great work has gone on with little or no notice from the public, though the Treasury Department has recognized it officially as the deepest seaport on the gulf coast below New Orleans, and has issued an order permitting vessels chartered to go to other Texas ports to come to Velasco to discharge cargoes and save expense of lighterage. Several such vessels have taken advantage of this order and unloaded

at Velasco for Galveston and Houston. Now, if there can be shown anywhere along Uncle Sam's coast greater results from the expenditure of private capital in the same length of time, we Texans would like to hear about it. R. MCCHINN.

Need of Dividing Large Estates.

NORFOLK, VA., September 8.

Editor Manufacturers' Record:

Referring again to your recent editorial under heading of "Facts for Western Farmers," allow me to suggest that the greatest drawback at the present time to the rapid settlement of the South is found in the fact that our farms are too large.

One of the influences of slavery was gradually to make large farms; hence we see the most of the lands of the South lying in large estates that once were noted for their magnificence, but are now simply noted for their size.

In the matter of purchasing farms nowadays we find that nine men want fifty acres or less to one man who wants 100 acres, and fewer in proportion still want 500 acres. It would seem to be a good plan for the monied men of the East, North, West, as well as the South, to buy up these large areas of land, especially where they may be bought at such ridiculously low figures as offered in many cases, and subdivide them into ten, twenty, forty acres, or more or less, just as the buyer may want or be able to pay for. Money so invested is better, safer and a more paying investment than when put into almost any other line.

No investments are better than those made in real estate, if judiciously made. We have in mind tracts of land here of 1000 to 5000 acres that will never be settled upon until subdivided and placed into the hands of a large number of buyers.

The fact is becoming more and more plainly apparent each year that the "small farm well tilled" is the proper agricultural basis, and the basis that insures the best and most satisfactory results in every way.

The man who would buy a home in the South is confronted at the very outset with the fact that he must buy nearly all "outdoors" in order to secure a home here. In the trucking belt around Norfolk the large old estates have in many cases melted away, and we see instead a dozen or more beautiful truck farms just groaning with plenty. It was only yesterday that we met an aged man on our streets, and on inquiring as to how matters were on the farm, was astonished to learn that he had retired from trucking and was loaning out his money. Inquiry developed the fact that he had been farming for years on thirteen acres of land. He had raised, clothed, fed and educated a large family, bought two of his sons farms costing \$7500, and that he was now able to live like a lord all the balance of his life on the money made from thirteen acres of land.

All over our land the farms are too large. Intensive, and not extensive, farming is to be the rule from this time forward. The land owners of the South are "land poor," and those who come here to buy must very often buy too much or not at all. The vacant lands of the West are all taken. Agricultural production may be said to have reached its full measure, especially as regards wheat, corn, oats, cotton, tobacco, pork, beef and all the staple crops. The demand for such is steadily increasing.

The sure effect is going to be seen in the advancing values of real estate, especially such as is well located. Why will not our monied men rightly read the "signs of the times," anticipate this matter a little and buy up, subdivide and offer in small tracts the large old estates of the South?

Here is a legitimate field for investment. It is a perfectly safe field for investment. Real estate is the true basis of all wealth—it underlies all else. Southern investments in farming lands, judiciously made, will

surely result in great good, not only to the investor himself, but also in great good to the South in many ways, provided these lands are cut up and offered again to actual settlers in such small tracts as they can safely take hold of, handle and improve.

We are greatly pleased to note the readiness and willingness of the MANUFACTURERS' RECORD to materially assist the South in this matter. We feel sure that much good will come of it. A. JEFFERS.

Birmingham Iron and Coal Notes.

BIRMINGHAM, ALA., September 16.

Editor Manufacturers' Record:

One of the two idle furnaces of the Woodward Iron Co. is being relined, and a new hot blast stove is being added. The firebrick is brought from Ohio, although there is steady progress toward bringing up the local product to the required standard.

The domestic coal mines report but little difference in their operations now and in ordinary years.

Neither of the two furnaces of the Pioneer Mining & Manufacturing Co. (Thomas) has been idle a day on account of the business depression, a record which it enjoys all to itself. CHAPPELL CORY.

GENERAL NOTES.

Brief Mention of Various Matters of Current Interest.

THE oil interests of Morgantown, W. Va., have grown immensely in the last few years. A pumping station is located several miles from the town and there are about seventeen tanks in the vicinity, each having a capacity of 25,000 barrels. There is another pumping station at Watson and one at Cumberland, Md.

THE Unicoi Iron Co., of Johnson City, Tenn., has completely cleared its indebtedness, the last amount paid out, being \$25,000, half of which has been paid in the Johnson City banks. The Unicoi Company is reported as trying to lease the Carnegie Iron Co.'s furnace, but nothing definite is known.

THE Collins Colliery Co., in which a number of Lynchburg (Va.) parties are interested, is pushing the work on its new plant at Thurman, W. Va., and will build a branch railroad from the mines to connect with the Chesapeake & Ohio Railroad. About 1000 tons per day will be mined and delivered to the railroad upon the completion of the plant.

AT the mouth of the Mississippi there is a little village built upon wooden piles standing far out in the water. This village, which is called Balize, is reached from the mainland by canoes or boats, and its inhabitants have to climb a kind of pole ladder to get to the doorways of their homes. This is probably the only place in the United States in which "pile dwellings" occur.

DISPATCHES from Frederick, Md., announce that the gentlemen interested in constructing the Middletown & Frederick electric road have decided to establish a summer resort on the line at Braddock. They have bought 125 acres of land on the National turnpike at that place, including a mountain summit, on which they propose to erect a large hotel and an observatory. The spring water is said to be very good at this point, and the locality possesses many attractive features.

THE Ellerslie Gas & Coke Co., of Charleston, W. Va., has completed its plant at Winifrede Junction and will commence operations this week with a large force of men. These works are attracting much attention, being a new process of utilizing many of the valuable products of coal heretofore wasted in coke-making. By this process the slack coal from the mine is sent to the works, and from it is obtained

coke, gas, gas tar, sulphate of ammonia, used for fertilizing purposes, and benzole, used as a dye-stuff. Mr. Theodore Wright is the president of the company, and Charleston and Philadelphia parties are interested.

IT is learned by the Jacksonville (Fla.) Times-Union that for some months past some Kentucky capitalists of large means have been looking favorably upon Jacksonville as a place for the establishment of a large and strictly first-class wholesale grocery house—one with sufficient capital, experience and enterprise to enable it to do a business of \$750,000 to \$1,000,000 annually. They have had agents and correspondents in Florida getting together information for them, and just at present they are said to be more than ever convinced that Jacksonville is the best location for them, and that the field in Florida is an exceptionally fine one for building up an immense business of this kind.

A PARTY headed by Prof. Samuel Aughey and Col. E. R. Snow, mining engineers, of Cheyenne, Wyo., are reported to have struck an exceedingly rich body of ore in Randolph county, Ga., in what is described by Professor Smith, State geologist, as the gold belt. An incline shaft has been sunk to a depth of 100 feet with gratifying results, showing a constant improvement both in grade and in size of the ore body as it deepens. The ore pans from \$10.00 to \$40.00, and as high as \$90.00 to the ton. The Goldberg Mining Co. has been incorporated to operate the claim, with Col. E. P. Snow as president; Prof. Samuel Aughey as vice-president, and Mr. J. E. Fiscus as secretary and treasurer. The capital stock of the company is \$1,000,000, with shares at \$1.00 each.

THE first entire cargo of beet sugar ever shipped to New Orleans is now due in that city from Hamburg. The vessel is the steamer Rotherfield and she carries 39,499 bags of sugar, equal to over 3933 tons. The sugar is consigned to the American Sugar Refinery, of New Orleans. Five years ago a shipment of 5000 sacks of German beet sugar was consigned to New Orleans, but none since. This cargo shows the growing importance of New Orleans as a sugar-refining centre. Formerly the refineries there rarely worked during the summer months, but during the past few years one or more of the houses have worked the year round, and the city now ranks among the most important distributing points of the country for refined sugar.

DURING the past two years Chattanooga, Tenn., has expended over \$500,000 in pavement and sewer work. This work included 55,229 square yards of sheet asphalt pavement at the average price of \$2.85 per yard, 58,724 square yards of brick pavement at \$2.35 per yard, 20x30-inch, 32x48-inch, 56x60-inch and 50x75-inch egg-shaped main brick sewers for \$1.80, \$2.50, \$4.10 and \$4.20 per lineal foot, respectively; eight-inch, 10-inch, 12-inch, 15-inch and 18-inch lateral pipe sewers for forty-eight, seventy-seven, ninety-two cents and \$1.24 per lineal foot, respectively. The preceding average prices cover nine miles of main brick sewers and 32.8 miles of lateral pipe sewers placed at an average depth of ten feet. All classes of pavement were laid on a base of first-class concrete six inches thick. It is interesting to observe that more square yards of brick pavement have been laid than of any other kind. A fine quality of vitrified paving brick manufactured at Robbins, Tenn., was used. The funds for public work are raised either by taxation of the whole city or by the sale of bonds, as the State constitution permits abutting property to be assessed for the cost of sidewalks only.

PHOSPHATES.

Phosphate Miners Still at Sea.

CHARLESTON, S. C., September 22.

Order has not come out of the chaos in the phosphate industry, but some progress has been made, and the negotiations between the phosphate miners and the State authorities are assuming more definite shape. On Friday of last week Messrs. Ellerbe and Montgomery, of the State phosphate commission, and Inspector Jones, accompanied by Mr. F. Brotherhood, of the Carolina Mining Co.; Wm. Gregg, Paul S. Felder, of the Farmers' Mining Co.; Jacob Paulsen, of the Beaufort Mining Co., and Moses E. Lopez, of the Coosaw Company, boarded the tug Catherine and made a tour of the region wrecked by the storm. Starting from Beaufort the party first visited Williman's island, where the Pacific Company has been carrying on operations. Then she steamed across to Buzzard's Island, where what is left of the quarantine station is to be seen. Out of nine buildings only one is left.

From Buzzard's Island the commissioners went around to the works of the Farmers' Mining Co. Besides having lost considerable in its floating stock, the Farmers' Company met with much damage at the works. The expensive loading and unloading apparatus has been completely destroyed, and there was other more or less serious loss.

The next objective point was Coosaw. All along the line wrecked vessels and others high and dry were to be seen. At the Coosaw works the commissioners had a convincing spectacle. How badly they are torn up there no one can tell. At present Mr. Lopez is having the place made habitable and clearing up the debris. After steaming around Coosaw river the Sea Island Chemical Works were inspected, but were found to have come off lightly.

This was on last Friday. That same evening Governor Tillman and Commissioners Ellerbe and Montgomery held a session in Beaufort to consider a plan for the relief of the mining companies, and the result of their deliberations was expressed in the following resolutions:

"Whereas, The losses sustained by the river phosphate miners have been very heavy, resulting in the total stoppage of the works and a loss by wreckage or being sunk of all the dredges but one, and great damage to the drying sheds, wharves and other properties, amounting in the aggregate to a very large sum of money, which will be required to restore the business to its status before the storm; now, therefore, be it

"Resolved, That we recognize the necessity and the equity of the State doing all that it legitimately can to assist the miners to resume operations. We recognize that this industry, which has yielded the State a large revenue, is, in effect, a partnership, and that as the State has shared in the profits of the miners, it should bear a portion of its losses. Therefore, under the authority of the act of the general assembly of 1892, we will, until the first day of January, 1894, require the payment by the miners of only fifty cents per ton upon all rock on hand at the time of the storm or mined and sold between now and then, with the condition that any company which shall not notify us in writing of its purpose to actively begin at once the work of restoration to the status before the storm shall be required to pay the present royalty of \$1.00, and will be liable on its bond for the full amount of \$1.00 should it fail to act in good faith.

"Resolved, second, That the conditions of the contract made by the State with its bondholders to set apart \$75,000 of the phosphate royalty as a sinking fund for

the reduction of the new Brown consuls forbids our changing the present royalty on the rock during the year 1894 until the said \$75,000 of royalty has been received. We will therefore require all miners engaged in the business January 1, 1894, or intending to engage in it, to pay a royalty of \$1.00 per ton on rock mined and sold by them until the said \$75,000 shall have been collected, after which miners will be permitted to mine and sell all the rock they can free of royalty during the balance of the year 1894.

"Resolved, third, That in order that there may be an equitable distribution among the companies which have availed themselves of the benefits of the reduction between now and the 1st of January, 1894, in proportion of their product during this year, every company will be required under bond to pay, whether it mines or not, its proportionate share of the said 75,000 tons at \$1.00 per ton before it shall be allowed to mine any rock at all."

The situation, then, is this: The miners can raise rock at a royalty of fifty cents per ton until January 1, 1894; then the royalty will be \$1.00 per ton until the aggregate royalties at that rate shall reach \$75,000, after which rock can be mined free of royalty during the balance of 1894. As the guaranteed total royalty of \$75,000 after January 1, 1894, is to be assessed upon the miners in proportion to their production during the past year, the following statement of estimated production during the year ended September 1, given by Inspector Jones, will be of interest:

Companies.	Tons.
Coosaw Company.....	58,631
Carolina Mining Co.....	56,500
Farmers' Mining Co.....	36,575
Beaufort Phosphate Co.....	21,184
Smaller operators.....	1,536
Total.....	214,427

Thus, if the plan suggested by the commission be accepted by the miners, the Coosaw Company will have to pay about 46 per cent. of the guarantee of \$75,000, the Carolina Mining Co. about 26 per cent., the Farmers' Mining Co. 17 per cent., the Beaufort Phosphate Co. 10 per cent. and the smaller producers less than 1 per cent. It may be taken for granted that this plan will not be at all satisfactory to the miners, but whether or not they will accept it remains to be seen. Neither the Coosaw nor the Carolina Company can get into shape to mine any rock at fifty cents royalty between now and next January. It will take them not less than six months to get ready to resume work. The losses are estimated by the companies as follows:

Coosaw Mining Co.	\$150,000
Carolina Mining Co.....	150,000
Farmers' Mining Co.....	30,000
Beaufort Mining Co.....	30,000
Total.....	\$360,000

The dredge of the Carolina Mining Co. was fully insured, but that is no compensation for a complete suspension of business for six or eight months.

The position of the phosphate people is strengthened somewhat by a statement regarding the loss on a recent cargo shipped to Glasgow by the Farmers' Mining Co. This rock analyzed 57 per cent. and sold at 6 1/4 d. per unit, which made a net loss of thirteen cents per ton after paying the freight and royalty, or \$323.96 on the cargo of 2492 tons.

With both the Coosaw and Carolina companies lying idle and other producers doing little or nothing, there is little river rock in the market, and a large advance in price may reasonably be looked for.

Port Tampa Phosphate Shipments.

September 13. — Arrived — American schooner Hugh Kelly, to be loaded by the Bone Valley Phosphate Co.

September 16. — Sailed — British steamship Clifton for Stettin, Germany, with a cargo of 2609 tons of pebble phosphate from the Bradley Fertilizer Co.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, September 21.

The phosphate market remains quiet, with little inquiry from fertilizer manufacturers, notwithstanding the prospect of higher prices, which seems inevitable on account of the curtailment of South Carolina production. Fertilizer manufacturers are moving cautiously, and are buying no more than their immediate requirements call for. Sales of South Carolina rock have been made in this market at an advance of fifty cents, and a further advance of fifty cents is now asked. South Carolina rock is now quoted at \$5.00 f. o. b. Ashley river, \$5.50 at Charleston and \$5.25 at Ashepool. The C. C. Dame arrived this week with 825 tons South Carolina rock for the Chesapeake Guano Co. Florida goods remain quiet, with no change in quotations. We note the sale of two cargoes of land pebble, 71 per cent. analysis, for ten cents per unit, delivered in New York. Florida 60 per cent. river pebble is offered at \$4.25 f. o. b. Tampa or Charlotte Harbor, and land pebble \$4.75 to \$5.00 for 65 to 70 per cent.

FERTILIZER INGREDIENTS.

The market for fertilizer material is stronger, and there has been considerable business during the past week. There has been a sharp advance in ammoniates, and the market is rather unsettled at this writing. We note sales of 1000 tons blood for September and October delivery, 2000 tons tankage (9 and 20) for delivery during the next four months, and 500 tons acid fish for Charleston at \$14.50 c. i. f. Current quotations are as follows.

Sulphate of ammonia.....	\$3 25@	\$3 50
Nitrate of soda.....	1 85@	—
Hood meal.....	1 95@	—
Blood.....	2 10@	2 20
Azotine (beef).....	2 00@	—
Azotine (pork).....	2 10@	2 20
Tankage (concentrated).....	1 95@	2 00
Tankage (9 and 20).....	\$2 10	and 10 cts.
Tankage (7 and 30).....	20 00@	21 00
Fish (dry).....	24 00@	—
Fish (acid).....	14 50@	—

CHARLESTON, S. C., September 18.

The phosphate market is in an unsettled condition because of the diminished output and the uncertainty regarding the future. It is certain that the output for the balance of the year will be small compared with the normal production, and higher prices are assured. The damage done to the fertilizer manufacturers in this vicinity will lessen local consumption for a short time, but as the factories will soon be in running order again, the local demand will be about as large as usual. There is very little rock on hand here and much of this is not in salable condition at this time. A statement just issued by Phosphate Inspector Jones shows that the stock on hand on September 1 was less than one-half the stock a year ago. The estimated stocks on hand on September 1, 1892, and September 1, 1893, are given as follows:

	Sept. 1, 1892.	Sept. 1, 1893.
Coosaw Company.....	40,370	15,411
Carolina Mining Co.....	11,631	6,826
Farmers' Mining Co.....	15,675	4,000
Beaufort Phosphate Co.....	11,048	4,927
John C. Nelson.....	306	407
James O'Hear.....	455	623
James Reed.....	60	—
F. W. Wagener & Co.....	12	—
Total.....	79,557	32,194

The shipments of crude rock from this port from September 1 to 15 have been 3870 tons, as compared with 5460 tons for the same period last year. Dried rock is quoted at \$5.00 to \$5.50 f. o. b. Charleston; \$4.50 to \$5.00 Ashley river.

A New Crushing Mill.

A radical departure in crushing machinery adapted for phosphate has been introduced in the construction of the Magic crusher, which is made by G. T. McLauthlin & Co., of Boston, Mass., and which was recently shown in these pages. As

this machine is of considerable interest to phosphate miners and consumers, further reference to its essential features may be of interest to our readers. This crusher reduces the rock to the fineness of sand at one operation, and the makers claim that this is done at much less cost than by a jaw or roller crusher. It is really a combined crusher and pulverizer, although having but one working piece, a heavy rapidly revolving table carrying steel hammers or splintering blocks by which the material is shattered and discharged through perforations in a steel cylinder. A large proportion of the product is sufficiently fine, and is screened out, the balance being put through a pulverizing mill. Several of these machines are being successfully used on ores, bones, rock asphalt, etc., and its work on these materials has suggested and demonstrated its adaptability to phosphate rock.

Another New Georgia Town.

The list of enterprises which have been projected in Georgia in the last year is a long one, but it is continually receiving additions. The latest is an organization called the Henrico Land Co., which has been put on foot by Messrs. H. F. Starke, W. E. Johnson, L. H. Moore and Hamilton Douglas, with a paid up capital of \$50,000, to be increased to \$500,000. The object of the company is to build a manufacturing and residence suburb. The township site consists of about 500 acres of land on both sides of the East Tennessee road six miles from the city of Atlanta. A handsome depot, side-tracks and other improvements will be put at the station, and negotiations are in progress for the establishment of factories, etc. A large canning factory plant will probably be erected at an early date, and it is also probable that a bicycle factory will locate there. Two hundred residence and business lots will be sold at a nominal price, simply to cover expense of surveying, etc., and to give an impetus to the project. Some of the best sites for factories will be given free to manufacturers as an inducement for them to locate. The country around abounds in valuable timber, it is said, and a granite quarry has been opened. Other industries are expected to locate there soon, and it is expected to be a flourishing community in a short time.

THE Houston Oil Refining & Manufacturing Co., Houston, Texas, will be ready to place its output on the market in a few days. The plant is well equipped, and has a capacity for refining over 500 barrels of oil daily. It has track connection with the Southern Pacific, Houston & Texas Central and Missouri, Kansas & Texas Railroads. Its officers are: I. N. Baker, president; A. C. H. Schweiss, vice-president; W. B. Chew, treasurer, and John Woodhead, secretary. The company has thirty tank cars for collecting crude oil from the mills.

THE exports of cottonseed oil from New York during the week ended September 14 amounted to 249,859 gallons, as follows: England 176,247 gallons, Germany 12,602 gallons, Mediterranean ports 33,195 gallons, South America 13,196 gallons, Holland 2604 gallons, West Indies 3520 gallons, Havre, France, 5000 gallons. The exports for the same period from New Orleans were 200,000 gallons to Holland.

IT is announced that a plan has been formulated for the reorganization of the Southern Iron Co. by the committee appointed for that purpose. It is understood that the plan contemplates the issue of bonds to cover the present funded and floating debt.

COMER, HULL & Co. shipped 2468 tons of pebble from Punta Gorda on the 15th inst. by steamship Winnie, for Dublin, Ireland; she drew eighteen feet.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Notes on New Oil Mills.

ALVARADO COTTON OIL CO.

The mill building of the new Alvarado Cotton Oil Co., of Alvarado, Texas, is 60x100 feet, and contains machinery with a capacity for handling sixty tons of seed per day. The equipment is of the latest patterns, and was furnished by Talbott & Sons, of Richmond, Va. Winfield Scott, of Fort Worth, is president; E. B. Harold, of that city, is treasurer, and C. Vanordstrand is secretary and general manager.

EDGEFIELD OIL CO.

The Edgefield Oil Co., which succeeds the Edgefield Ginning, Milling & Fertilizer Co., Edgefield, S. C., has a well-equipped plant of thirty tons daily capacity. The engines are Westinghouse compounds, the presses were from the Smith-Vaile Co., the separating machinery from the D. A. Tompkins Co., of Charlotte, N. C., and a Wells huller is used. In connection with the mill the company operates a six-gin ginnery, which has Tompkins-Carver 70-saw high post gins and Thomas presses. The ginning capacity is 100 bales per day. The mill and ginnery are equipped with Caldwell steel conveyors and Hill automatic fire sprinklers, and additional fire protection is afforded by hydrants and hose in and about the buildings. The entire plant is lighted by electricity, a United States dynamo being used. The officers of the company are as follows: Charles H. Fisher, president and treasurer; D. A. Tompkins, vice-president; R. M. Miller, Jr., secretary, and the directors include Messrs. John Oliver and Fred Oliver in addition to the officers named.

EMPIRE OIL CO.

The new mill of the Empire Oil Co., at Temple, Texas, will be in active operation not later than October 1. The mill is equipped with Bushnell heaters and presses; the 250 horse-power Corliss engine and three boilers were supplied by the Bass Foundry and Machine Works, Fort Wayne, Ind., and the separating machinery was furnished by the H. W. Caldwell & Sons Co., of Chicago. The main building of the mill is built of brick, and the plant has a daily capacity of 100 tons. The officers are William Perry, president and general manager; W. E. Hall, secretary and treasurer.

The Markets for Cottonseed Products.

NEW YORK, September 20.

The market for cottonseed oil during the week has developed further strength, and quotations are generally advanced. There has been considerable competition for crude oil in Texas, and prices have further improved, the Western refiners appearing to be quite anxious for oil for September and October delivery. It can not be said, however, that there has been much new business in oil here, as buyers do not feel as yet compelled to meet the higher prices current, and are drawing upon accumulations that they must have made recently before the advance. A careful review of the stocks held here does not put them beyond 6000 barrels, chiefly of yellow oil, with only incidental small lots of prime crude. This would not give room for much activity here. It may be said, however, that oil is somewhat difficult of sale just at present, although a demand may come at any moment under invigorating outside influences.

The export demand for compound lard continues large and absorbs large quantities of oil, and promises to exceed last year's exceptionally full trading. All of

our lard refiners are busy with their product, while the West is rushed with orders. Producers West have bought oil largely ahead in expectation of better business in compound lard, yet their markets for cottonseed-oil stand relatively higher than this point, and in a position that we may at any time see a demand from that quarter in this market, unless some weakness is developed.

All foreign markets have meagre supplies of oil. Even England, which depends largely upon its own make of off-grade stock, is in short supply, and inquiries have turned to this market. There has been a further advance of 9d. in oil in Liverpool, making a total advance of late in that market of 1s. 3d. Export buyers, however, are not yet ready to take much interest in prime summer yellow, and the Marseilles market is much below a parity, although a better feeling is noted. Exporters are at present, therefore, holding aloof from the market, but the position there is such that they may soon be free buyers of oil. The butterine districts abroad are all busy with their product, and, of course, are liberal consumers of oil, but their stocks of oil are pretty liberal. There is a good olive crop, and the conditions are such as to warrant the expectation that new oil will meet with ready sale for the time being, unless the small supply of early oil advances prices to such a figure as to make exporters continue to hold aloof.

The offerings of cottonseed oil have been quite light during the week throughout the cotton belt, and practically nothing east of Alabama. There have been sales of liberal quantities of crude oil from Texas, probably absorbing the entire September and October production.

The situation of oil and its possibilities of further improvement in price springs chiefly from the general demands for edible fats, as natural after the long interference with the ordinary run of business from the financial panic and the consequent material reduction in stock in consumers' hands. Hog products have been rapidly advancing; lard, tallow and greases, including oleostearine, are all at comparatively high prices, and if the current rate of buying continues for the next sixty days packers and receivers will not be burdened with supplies, and their output will be promptly taken up. The soap-makers, both here and abroad are pretty busy, and, with the scarcity of tallow and its higher prices, they are likely to consume increased quantities of cottonseed-oil. Off-grade yellow has been sold here at thirty-six cents; prime summer yellow is hard to buy under forty cents, although some small lots may perhaps be had at thirty nine cents; prime white has been sold at forty-four to forty-five cents, and there is a considerable demand for that oil. Prime crude, with almost no stock, is quoted at thirty-four to thirty-five cents, and sales have recently been made of old crude at thirty-four cents. Thirty-five cents will probably be paid for prime crude October delivery; perhaps even a better price could be obtained if a quantity was offered. The sales of prime crude f. o. b. loose at the mills during the past week cannot be much less than 6000 barrels, and there is now very little oil offering from that quarter. We hear reports that thirty-two cents has been bid for prime crude in Texas. If that be true it only shows that our market is relatively much lower, as prime new crude ought to be worth thirty-eight to thirty-nine cents with oil selling at thirty-two cents f. o. b. mills in Texas.

We regret that there has been so little business during the advance, as it tends to impart a lack of confidence in values. The surroundings, however, are all at the moment entirely in favor of higher prices. Whether that will continue to be so is quite another matter. The financial panic

appears to have had an opposite effect upon prices of many products from what was generally expected. It has resulted in a sharp curtailment of consumption and steady reduction of stocks of many articles and stronger markets in many cases. At the same time these stronger markets do not mean there is an active business. People are still buying only from hand to mouth, and, while full prices can be obtained in a good many articles when a buyer wants some goods, yet sales cannot be forced. The general expectation was that there would be a large amount of products forced upon the market on account of the monetary stringency, while the monetary stringency has really resulted in curtailing the production, especially so far as oil is concerned. It is too early yet to have any decided opinion upon the general course of prices for the season.

HOPKINS, DWIGHT & CO.

NEW ORLEANS, September 18.

The market for cottonseed products shows little change; meal is off fifty cents to \$1.00 per ton, but other prices are unchanged. Seed is bringing \$11.00 per ton of 2000 pounds delivered here. Meal is jobbing at \$21.00 to \$21.50 per ton of 2000 pounds at depot, and for export it is selling at \$23.50 to \$23.75 per ton of 2240 pounds f. o. b., current month delivery. Crude oil for shipment is quoted at twenty-eight cents per gallon in barrels, and twenty-four to twenty-five cents loose for strictly prime. Refined oil is quoted at thirty-three to thirty-four cents per gallon for prime oil in barrels in quantities for shipment. Soap stock is one and one-eighth to one and one-quarter cents; foots, one and one-half cents; hulls, thirty to thirty-five cents per 100 pounds delivered; ashes, \$17.00 to \$18.00 per ton of 2000 pounds f. o. b.; linters, A, three and three-quarters to four cents; B, three to three and one-half cents; C, two and one-half to two and three-quarter cents.

ROTTERDAM, September 2.

The market for cottonseed oil has been dull and quiet during the past week. The consumptive demand remains inactive, owing to the continued summer weather, and the arrivals continue important, and still much oil is on the way; so the stock is steadily increasing. It is most certain that there will be a large quantity of cotton oil here unsold if the oil of the new crop shall make its appearance. The butter-makers, who did not use much oil the last four months, will not buy, and will wait till the last moment. Last week they offered thirty guilders per 100 kilos (equal to \$12.00 per 220 pounds, or about forty cents per gallon of seven and a-half pounds). This price is equal to about thirty-eight cents per gallon free on board in one of the American Atlantic ports. The American holders did not accept this figure for their oil warehoused at Rotterdam. The last few days the offers from America are easier, and some owners are inclined to sell their goods at thirty guilders. As written, the market has been dull, and although the price of thirty guilders was easy to obtain during the first days of the week, the last days of the week the butter-makers offered still lower prices, and today only twenty-eight to twenty-nine guilders is obtainable for large quantities. Many of the owners are not inclined to listen to this price, and ask thirty or even thirty-three guilders for their goods, and therefore, of course, they don't sell a barrel. Only twenty-eight to twenty-nine guilders is obtainable, and probably the owners will do very well to sell their goods as soon as possible, as higher prices cannot be expected. Of course, nobody is inclined now to buy very large parcels, because butter-makers prefer new oil, and will gladly pay some guilders more for new than for old oil. They know that there are over 40,000 barrels cottonseed oil in stock here, and because prices of other oils (peanut, sesame, etc.) are also

much lower, say four guilders per 100 kilos, they will buy only if they can get the oil at moderate prices. G. W. SANCHES.

ROTTERDAM, September 9.

Since my last report the warehouse director has published the August statistics of cottonseed oil. The official figures are as follows:

	Kilos	Gross weight
Stock on August 1.....	6,871,589	
Arrivals during August.....	686,365	
Deliveries during August.....	7,557,954	
Stock on September 1.....	1,388,021	
	6,169,933	

The stock in Amsterdam remains 498 kilos, with no arrivals or deliveries during August. Therefore the stock in the royal warehouses decreased in August by 70,656 kilos, and on August 31 amounted to 6,169,933 kilos, or about 30,000 barrels.

The large deliveries are astonishing, but were due to the large sales at low prices during the last week of August. The buyers, the butterine manufacturers, have taken the oil in their manufactories or private warehouses in order to save the charges of the public warehouse. Therefore, although the official stock has decreased, it is safe to say that the whole stock in Holland on August 31 was at least as important as on August 1.

The market remains quiet this week; again some large parcels have been sold below the official quoted prices. At about twenty-eight Dutch guilders per 100 kilos some thousand barrels have been sold. This price remains obtainable, but a good part of the owners will not sell below thirty to thirty-one guilders. The weather is somewhat colder now, and, therefore, we may reckon that the butter-makers will use good quantities of oil before long.

Oil of the new crop has not yet been offered in our place. Last year, in September, large contracts had already been made for November and December shipment at twenty-eight guilders c. i. f. terms. The buyers here are inclined to pay this price for new oil, but it seems that the American refiners will not sell new oil at this low figure. In fact, twenty-eight guilders is a low price, and probably somewhat higher price will be obtainable for good oil in the coming cold season. G. W. SANCHES.

[NOTE.—The price in guilders per 100 kilos multiplied by 1.34 will give the price in cents per gallon.—ED.]

Cottonseed-Oil Notes.

THE new Landa cottonseed-oil mill at New Braunfels, Texas, commenced operations last week, and is now making oil. The plant is one of the best in the State, being equipped with all the latest improvements.

THE Palestine Oil Co., of Palestine, Texas, is building a seedhouse at Jewett, Texas, for the reception of cottonseed.

THE Union Oil Mill, Union, S. C., will start up for the season about October 15. For two years this mill paid no dividends, devoting its earnings to improvements, but last season it made a very successful run and declared a dividend of 20 per cent.

THE oil mills in Columbia, S. C., are ready for the season's work and are awaiting the arrival of seed. Much of the South Carolina seed has been damaged by storm, and there is prospect of a limited home supply of good seed.

THE entire plant of the Seneca Oil & Fertilizer Co., at Seneca, S. C., will be sold on October 10. The mill has a daily capacity of ten tons and a three-gin ginnery. The plant is in good condition and ready for operation.

THE Consumers' Cotton Oil Co. started its new mill in Houston, Texas, last week, and it will run steadily through the season.

THE Farmersville Cotton Oil Co., Farmersville Texas, is running night and day and making a good output of oil.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 138 and 139.]

Colored Help for Textile Mills.

The existence of a superabundance of cheap but unskilled colored labor in the South has given rise to many questions regarding the use of this element in more productive and more profitable employment than simple manual labor. Many experiments in the use of colored labor in various branches of manufacture have been tried and with widely differing results. The preponderance of opinion among those who have had most experience with colored labor is that this class of help is unavailable as a rule for anything above the simplest kinds of work, for which no degree of intelligence or skill is required. This opinion rests upon the present untrained condition of the colored labor, and in most cases is modified by the belief that this class of labor might be utilized for more intelligent operations if properly trained. For the purpose of ascertaining the attitude of Southern mill managers in regard to this matter the MANUFACTURERS' RECORD has asked a number of Southern manufacturers, superintendents and managers to give their experience and opinions on the subject of utilizing colored help for spinning, weaving or any other mill work requiring skill and intelligence. The communications on this subject which follow form an interesting contribution to the discussion of the negro problem:

OTIS G. LYNCH, superintendent Enterprise Manufacturing Co., Augusta, Ga.: "No person who has examined the various articles of wearing apparel, as well as many other articles of household use and adornment, made by slaves under the direction of their mistresses, can doubt the ability of negroes to be made skillful operatives under proper direction for the manufacture of coarse and even medium cotton goods. Many of these articles, made entirely by hand, exhibit ingenuity, skill and persevering effort of a high character. Previous to and during the war the employment of colored persons was quite common in a number of cotton mills then in operation in Georgia and South Carolina. They were generally in small establishments operated by individuals who owned the mills as well as the operatives. These mills without exception were engaged in making coarse goods, the machinery being invariably poor and crude in its construction; the output was not very creditable. A negro's well-known fondness for picnics and holidays is certainly against his efficiency as a reliable mill operative, but the propensity of this race in this direction is not greater than many other people who can dispose of their own time as they please, and it can be overcome by persistent and regular discipline. Heretofore there has not appeared to be any necessity for discussing the feasibility of making good factory operatives out of negroes, and I do not think the time has arrived when it is necessary to do so. For myself, I should have no hesitation about trying to run a mill successfully in the South on plain or medium goods with colored labor."

F. P. TOOF, general manager Bluff City Cotton Mills, Memphis, Tenn.: "I do not pretend to discuss the subject of colored help in textile industries (cotton) by the light of experience. To my mind it is a question that will engage the attention of Southern manufacturers at no distant day, and then it will be solved as all questions are—when necessity demands it. My individual experience with colored help covers the picking-room and cards and rope-making. In such work I have used and am using them with satisfactory results; they

are confined to themselves, and do not come in contact with our white labor. I have never introduced them on slubbers, fly frames, spinning and weaving, but have no doubt they would make efficient hands with the necessary amount of training. But taking the question in its broadest sense with colored hands operating a cotton mill entirely, I certainly, in the personal experience I have had, would not recommend a mill to be built with the distinct view of employing colored operatives. I believe such a venture would prove disastrous before the labor and discipline could be brought up to the standard of a high production of quantity and quality, two very important points to be attained to make a mill profitable in the close margins of manufacture that now prevail.

"I have given the subject some thought, and the conclusion I have made is, that before I would undertake to operate a mill exclusively with colored hands—and when it is done I believe it will have to be done exclusively, owing to the well-known prejudice that exists outside of the heads of departments among overseers, second hands, etc.—I should want them to have some preparatory instructions. And it has occurred to me that if some philanthropist, such as Mr. Slater, for instance, would erect at some central point, say, a 5000-spindle cotton mill, well equipped and under the superintendence of a thorough manufacturer, and engage the colored children to go to school (?), say, eight hours a day from the ages of twelve to sixteen years, and learn the rudiments and discipline necessary, at a small compensation, it would be but a few years when there would be a large force of eligible operators, and mills would be built especially to utilize the labor. The product of such an enterprise, properly conducted, would make it self-sustaining, and fit the pupil for service in regularly organized mills.

"If such pupils would learn to operate machines in the different departments, and receive a certificate from the superintendent of the institution that they had, so to speak, graduated and were competent to operate certain machinery, in my opinion, before long mills would be built to use them, and feel perfectly safe in the undertaking. Take the surroundings of this city (Memphis, Tenn.) and it is safe to say there are not less than 10,000 available colored children from the ages of twelve to sixteen years who would make good operatives in cotton mills by first receiving the preparatory training referred to. And it has occurred to me that the Slater Fund might be used in this manner if the proper efforts were made in that direction. In fact, for the benefit to be obtained, a State might enter the field with this end in view. The good to the South cannot be calculated.

"The New England mills are largely dependent upon and are being operated by French-Canadian labor, who are no doubt the highest character of operatives they have, and with large immigration from Europe they can hardly want for hands. The South has no immigration to draw from, and if the manufacture of cotton goods is to reach the high plane that its natural advantages claim for it, in my judgment, the colored race will have to be utilized. And where is there a larger supply of laboring people to be reached than is afforded by this race? All who live among a large negro population know that the younger portion of the ages mentioned eke out an existence, we hardly know how, but largely through the back door of the servants' quarters. These could be made to work and build up the most magnificent industry on this continent. Reckoning seventy spindles to the operative, there is a force that can be educated to operate as many spindles as there are operated in Great Britain. I think that the mills in

the South, especially Mississippi, Louisiana, Alabama, Tennessee and Arkansas, are more or less deficient in the number of hands necessary to operate their mills, and it is more the rule than the exception that they pay transportation for long distances in order to secure hands, and this generally without the least security for the passage money. Hence, if we are to build as many more mills in the next ten years as in the past ten years, my opinion is the question of labor supply will play an important part. And, as "necessity is the mother of invention," some way will be provided to utilize the colored population in our mills. My opinion is that the safest and most satisfactory plan will be to reach them through a preparatory industrial school of cotton manufacture."

T. L. WAINWRIGHT, secretary and superintendent Stonewall Manufacturing Co., Stonewall Station, Miss.: "In the first place, there is not the least necessity for colored help in cotton mills in the South, as there is a great abundance and a superfluity of the best white labor willing and anxious to work in cotton and woolen mills. I think they are much more reliable and better help than the negro would ever be any way. Again, a mill could not be run with a mixed crew, part white and part colored, as the white people would not work with the negro in the same mill. Therefore if negro labor were to be used at all it would have to be used entirely. I have never had any experience in working negro help except as firemen, picker-room help and outside labor in the yard, and occasionally negro boys as sweepers. In these cases and for this kind of work the negro answers every purpose, but I would certainly not think of working them in the mill as spinners, weavers, etc., and especially as there is not the slightest necessity therefor."

MUSCOGEE MANUFACTURING CO., Columbus, Ga.: "We have never experimented with colored labor in our mills, and hence cannot give you any information on the subject. We do not think this labor would do. It would not be practicable to work them along with the white operatives, and it would take a long time to train the colored operatives, if it could be done at all, which we very much doubt. Colored operatives for Southern mills are a remote possibility."

M. G. STONE, superintendent Spartan Mills, Spartanburg, S. C.: "No doubt the colored people are physically and mentally competent to do mill work if properly trained. Never having had any experience with colored help as mill operatives, I could not tell anything about them."

J. F. HANSON, treasurer Bibb Manufacturing Co., Macon, Ga.: "Have had no experience with colored labor in cotton mills except in handling heavy stuff and working in the picker-room, and hence can give no facts. I think, however, that it is very doubtful if a mill could be successfully operated with colored help all the way through."

WM. ENTWISTLE, superintendent Pee Dee Manufacturing Co., Rockingham, N. C.: "We have never tried colored help for spinning and weaving. We have never had a single application from any colored person for such employment, and under no circumstances would we employ them in any department where white girls are employed. Apart from this, we do not think they are adapted to the close confinement or capable of conforming to the system and discipline incident to factory labor. We employ colored men in the yard and in the dyehouse. As only a few are so employed, we can select from the many those best suited to the work. Under such circumstances and in such cases they make very

good help. A small proportion of them make very fair masons, bricklayers, etc. More of them might do so but for their inherent indisposition to work more than is necessary to procure a bare subsistence. The colored man is most at home—and is then the happiest creature on earth—when farming his own little spot of land, raising his own hog and hominy; when he has got his sweet potatoes and cotton patch, and rests from his labors under his own vine and fig tree with none to molest him or make him afraid. Our most peaceful and contented colored citizens are those thus fortunately situated. Over twenty years of experience and close observation in the South convinces the writer that industrious rural life is in all respects best suited to the welfare and happiness of the colored race and the prosperity of our country."

F. S. MOSHER, superintendent Clifton Manufacturing Co., Clifton, S. C.: "I have had practically no experience with colored help in a cotton mill, but have worked great numbers of them at other work, but my opinion is that they would not be a success."

J. F. ILLER, superintendent Piedmont Manufacturing Co., Piedmont, S. C.: "I do not think that the colored help would make good operatives. In the first place, they are lacking in intelligence and are very unreliable and have no pride. In the second place, since their freedom they do not want to work more than just enough to get bread to eat, and that is about half time. I have never worked them as operatives in the mill, but I worked in mills with them when they were slaves. They were very hard to manage even then, and we could never get them to do the work as it should have been done. I am of the opinion that they would not make first-class help in cotton mills."

G. W. WILLIAMS, president and general manager Swift Manufacturing Co., Columbus, Ga.: "We have had no experience in our mill with colored labor. This being a manufacturing town for many years, there is an abundance of white labor accustomed to mill work. We see no reason why colored labor would not fill each and every place about a cotton mill if so trained. Each and every town in the South having public schools is overrun with negroes; seeking an education; many of them are very apt and quick to learn and would make with proper training excellent mill hands. The two races would not work well together in the same mill."

BYRD DOUGLAS, president Tennessee Manufacturing Co., Nashville, Tenn.: "We have had no experience with colored help as operatives in this mill, and consequently are not able to give our views as to their capacity from actual experience. We employ quite a number of colored laborers as yard hands, firemen and teamsters, and also colored women as sweepers and scrubbers, and, so far as our experience goes, we do not think that they show capability and intelligence sufficient to become skilled operatives. As a class the colored people in this section are very unreliable and have very little desire to better their condition. They seem perfectly satisfied with their present station, and for this reason we do not think as a class that they will ever become desirable as skilled operatives. We do not know of our own knowledge any mills in the South that employ colored operatives."

J. M. SCOTT, superintendent Nashville Cotton Mills, Nashville, Tenn.: "The scarcity of help in our cotton mills has been a source of great annoyance to managers during the past two years, and naturally the question arises, what are we going to do to help ourselves in the matter? Some have suggested the employment of

colored help. To the average Southern man the idea is preposterous, but there are men who would be willing to try the experiment, and the writer is one of them. Of course, there would have to be enough colored help to run the entire mill, as it would be impossible to get a mixed crew, as white help will not work with colored hands. Now the question arises, is it possible, technically, to educate the colored race? I honestly believe it is, and my idea is that it will have to be tried if they keep on building cotton mills as rapidly as they have been doing.

"I do not see any reason why colored help would not prove a success. Looking about us we see them making rapid progress in competition with the whites in every industry where they are permitted to work. We see them holding their own, and in many cases doing better. In most of our cotton mills we have colored helpers, sweepers, scrubs, yard hands and firemen, and a few mills work them in the dye-house and picker-room. I have had a colored man as engineer in a cotton mill of 6000 spindles, and in the same mill we had fourteen boys in the mule spinning-room and four of them were piecers. They did their work as well and as much of it as any four boys I ever saw in any mill in the country.

"I have watched with much interest the efforts made by colored scrub women to piece up ends on ring spinning frames as they were working around them. They seemed to have taken a lesson like Robert Bruce as he watched the spider. The spider fell seven times, but still he persisted in endeavoring to gain the height desired. Bruce took pattern, went forth and gathered his scattered forces and put his enemies to flight. So I have watched these scrub women, and never yet have seen them leave the frame without accomplishing their purpose. I have in mind now a colored girl about fourteen years of age whose mother cleaned harness in the weaverroom, and the girl frequently came in to help her mother. That girl got to be quite an expert weaver just by having a chance to clean looms for weavers, thereby earning a few cents, and watching looms while weavers were at the washroom. She could run plain twills or checks. From personal observation I see that the colored people are educating their children, while the poorer whites are neglecting what I consider the most important duty devolving upon parents—giving their children an education. Those who have charge of labor know how much easier it is to teach a hand who can read and write than it is to teach an illiterate person."

Z. T. McKINNEY, superintendent Trion Manufacturing Co., Trion Factory, Ga.: "I have never had any experience with colored help at all, and from what I have seen of it in other mills, I should say that it would be very unsatisfactory. I do not think it can be utilized throughout the mill, but for doing ordinary work, such as opening cotton and feeding openers, and cleaning floors and walls, they answer the purpose very well, but for carding, spinning, weaving and finishing I think they would prove a failure, and would certainly cause trouble between themselves and white labor in the Southern mills. They are too unreliable for cotton mills, in my judgment. I think there are some who are intelligent enough to be trained to do skilled work in a cotton mill, and possibly to run a mill entirely by the more intelligent of their race might be made a success. I have seen them employed to feed openers, to fire boilers, to open cotton and to spin on woolen jacks, and seemingly they did their work very well, but required the closest kind of watching to keep them straight. I, myself, would not undertake to run a mill with the colored help with whom I have come in contact, having lived among

them all my life, being a Southern man, and having spent thirty-seven years of my life inside of cotton mills."

H. H. HICKMAN, president Graniteville Manufacturing Co., Augusta, Ga.: "I beg to say in the first place that I am not prejudiced against the negro. I was raised with them and like them as negroes, but I do not believe that cotton factories will be run successfully by negroes in this generation. Very few of them will ever become skilled laborers in a cotton mill. I employ some few to do common work, but none are put to a machine except to feed the pickers; this requires no skill. You no doubt are aware of the fact that the white labor will not work with the negro at the machine. You cannot mix them in a cotton mill; therefore, if employed, they must run the mill alone. I should shrink from being the owner or president of such a mill. If we concede the fact of capability, unreliability would be sufficient cause for not employing them. Cotton mills to succeed must have but few holidays and regular hours daily; this cannot be obtained with negro operatives. They would close the mill to go to a picnic or go off on a railroad excursion and spend the last dime in their pockets, and very many of them, as soon as they get ten dollars ahead, will quietly walk off without notice; some of them will return, others will not. Negroes are not inventors, and few, if any, are skilled in handling machinery. In conclusion, I am inclined to the opinion that you will not live to see a cotton mill run successfully by negro operatives."

Cotton Market.

NEW ORLEANS, LA., September 19.

Editor Manufacturers' Record:

Since our last the market has been subject to sharp fluctuations, the tendency, however, being to higher prices. This has been largely induced by the indisposition of the farmer to accept current prices, as well also as to his ability (at least in certain sections) to hold back his cotton. These influences, together with improved financial condition, have exerted a stimulating influence on prices. The Atlantic States have been comparatively free sellers, and the disposition to hold seems to have been chiefly confined to Texas. Thus far the desired effect has obtained, as engagements for September shipment necessitated the prompt purchase of cotton, irrespective of opinions as to its course.

The protracted delay of the Senate in taking action on the silver bill may again become a prominent factor, as it has been generally thought that a repeal of the bill would bring about a more confident feeling. The anticipation of such legislation has already demonstrated, at least in part, what would follow the repeal of a bill which is believed to have occasioned the depression in prices of all kinds. The recent bureau report, as well as the various State reports published, have been quite unfavorable, and it may be that they have discounted possibilities instead of reciting actual conditions. Such statements are not unusual at this season of the year.

We take the position that as eleven years ago Texas marketed 1,500,000 bales, and the remaining States 5,500,000 bales, it is only fair to presume that should Texas give the same crop this year, the remaining States, with an increased acreage and fertilizers, should afford 500,000 bales more than that season. This would give a crop of 7,500,000 bales.

Texas advises freer offerings, and the expectation of increased cotton shipment very soon. Our North Carolina correspondent reports that the damage advices emanating from that State are greatly exaggerated, and that the crop outlook is quite good.

The recent advance, that is a part of it, has fully demonstrated the ability of the producer to create certain conditions, but

it remains to be seen if desultory action in the early movement of the crop will accomplish permanent results.

Our New York telegrams indicate easier feeling, predicated on the expectations of increased crop movement, which has since been confirmed by the decline which has occurred.

The weather has been quite favorable for picking, and, irrespective of the final outturn of the crop, the indications are much freer receipts will soon will so be due.

Our spot market closes quiet at one-eighth decline, with sales of 150 bales.

ATWOOD VIOLETT & CO.

Southern Textile Notes.

THE Maginnis Cotton Mills, of New Orleans, after a shutdown of three weeks, resumed work on Monday last. During that period a large force of workmen have been engaged in overhauling the machinery and adding a large quantity of repair work, in order to put the plant in first-class condition. The opening up of these mills will give employment to about 800 people, and the pay-roll will place some \$8000 or \$10,000 in circulation every two weeks.

PREPARATION for starting operations in the new Trenton Cotton Mill at Gastonia, N. C., are being pushed rapidly. The mill building is completed, two boilers are being placed and the remainder of the equipment is daily arriving. The equipment will consist of 3000 spindles and the product will be warps. The officers of the company are: Geo. U. Reagan, president; T. C. Pegram, secretary and treasurer, and Geo. Gray, superintendent.

C. W. WILDER & Co.'s silk mill at Fredericksburg, Va., has resumed operations after being closed six weeks on account of depression in business. The plant employs 100 hands.

THE Druid and Mt. Vernon cotton-duck mills, near Baltimore, Md., will resume operations now, after a shutdown of over a month. These two plants employ 2000 hands when in full operation.

THE Lowell (Mass.) Machine Shop has been given the order to furnish the Gastonia (N. C.) Manufacturing Co. with a large number of looms for weaving the product of the latter company's spinning mill.

THE Wilmington (N. C.) Cotton Mills, after a suspension of four weeks, will resume work on September 25. During the stoppage the mill has been thoroughly repaired, and a new engine and boiler for additional power are to be added. The mill will not work on full time in all the departments for the present, but the resumption will give employment to a large number of needy people.

MR. F. EASTWOOD, of Fall River, Mass., has lately been at Charlotte, N. C., examining its advantages. His firm at Fall River is now manufacturing sizing material for cotton mills, and they supply a large proportion of the Southern mills. Mr. Eastwood has as yet not definitely decided to locate a plant at Charlotte, but it is to be hoped that he will do so shortly.

MR. J. H. CROWLEY, formerly superintendent of the mill at McAdenville, but now of Philadelphia, contemplates starting a weave mill at Charlotte, N. C., and is now engaged looking for a suitable site. He has options on several pieces of property, and will very likely close them shortly and decide to erect the plant. He proposes to instal about 100 looms for fancy weaving.

THE little village which the Courtenay Manufacturing Co. is building on Little river, Oconee county, S. C., is called Newrt, after the ancient Irish city on Carlingford bay, which ranks next to Belfast in manufactures in Ireland. The massive stone dam is nearly across the river, and is a modern structure, broad-

based and twenty-two and a-half feet high, with two five-foot gates, one on each side. The gates are lined with iron castings two inches thick, and the gates are of the latest design and operation. The mill building is rising on solid foundations, the village is partly built, and before frost the mill will be covered in. The company is named after ex-Mayor Courtenay, of Charleston, who is the largest stockholder and president of the company.

THE company organized by Mr. F. Dilling several months ago at King's Mountain, N. C., has commenced work on its plant. Ground has been secured and the storehouse is finished, several tenement houses built and the foundation of the mill building is being laid. It is to be two stories high, 191x84 feet. Engine, boiler and slasher-rooms will be adjoining. The equipment will be 5000 spindles and 250 looms. Machinery will probably be ordered from the Lowell (Mass.) Machine Shop, and the product will be white goods.

THE company which P. S. Baker organized at King's Mountain, N. C., some time ago has chosen the name of the Crowder Mountain Manufacturing Co. A weave mill to produce plain white goods, operating 100 looms, is now in course of erection on Crowder's creek, about three miles from King's Mountain. The building is one story high, 66x100 feet, and the plant will be operated by water-power. Mr. Baker is secretary of the company, and Mr. R. H. Garrett is president.

THE building for the new Modena Cotton Mill at Gastonia, N. C., is about half completed and is being pushed ahead rapidly. The equipment for this plant has not yet been decided upon, but it will probably be weave and spin. Mr. L. L. Jenkins is president of the company, and J. D. Moore, secretary.

COL. W. H. WILLIAMS, of Newton, N. C., is preparing a plan of reorganization of his business to submit to his creditors so that he can resume operations at the Newton Cotton Mills.

THE Cowpens Manufacturing Co., of Cowpens, S. C., has commenced work on its new weave shed and will push it to completion as rapidly as possible. The equipment to be put in is 200 looms.

THE officers of the Maginnis Cotton Mills at New Orleans, La., contemplate changing some of the cards in their old mill and expect in the near future to add from 100 to 200 looms to their present machinery.

MESSRS. CHAPMAN & CO., of Providence, R. I., contractors for the Columbia Cotton Mill Co., are making rapid headway with the new mill on the canal at Columbia, S. C. All the heavy exterior work on the building is completed and the roof is now being put on. Double and triple flooring will be laid on each floor. The entire outfit of machinery has been ordered for some time, and is now built and ready for shipment. In a few weeks the equipment will commence to arrive and will be placed in position as soon as received.

THE cotton-manufacturing plant of the Dartmouth Spinning Co., of Augusta, Ga., will be sold at public auction on October 3 in pursuance of an order of the Superior Court.

SAN ANTONIO, TEXAS, reports a fairly good real estate market and indications of a general revival and a smart business during the coming winter. The present demand is for modest cottages or low-priced lots on which to build small houses. Real estate dealers report a large number of inquiries from distant cities. There is a good deal of inquiry from Northern people who want to know about farming property in the vicinity of San Antonio. A good many farms are being sold to new settlers. Money is easier and can be obtained without trouble on good security.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 138 and 139.]

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

The By-Products of Saw-Milling.

[From *Hardwood*]

The average operator of a saw mill relies for his profit on the good lumber he is able to turn out. He measures the chances of loss and gain wholly by the percentage of clear stock his logs will cut, and the price of such lumber in market. The mill culls are waste anyway, and if he gets within a moderate percentage of the cost of his common and shipping culls, he congratulates himself upon his closeness in figuring and economy in operating his mill. His profits necessarily depend upon his ability to get enough for his high-grade lumber to cover the greater part of the cost of his logs and all his profit.

It is not difficult to figure out something ahead in this, by assorting his lumber so that it will run well to good, but such liberality not uncommonly defeats itself, for when the stock gets into market, and is inspected under the buyer's severer construction of the rules, the unlucky shipper very likely finds that he has a heavy freight to pay on much of it that will not bring cost at the delivery point. More than one saw-mill enterprise that promised fairly enough in the beginning has landed the owner in bankruptcy because the timber would not make enough clear lumber to carry it. And are they not falling thus around us every day for a like reason?

This result is largely due in nearly every case to the neglect of the by-products of the saw mill. Many mill operators look upon anything but lumber as unworthy their attention, and so they run everything that will not make boards or plank or dimension stock that is fit to ship into the conveyor and up the incline to the slab pile or refuse burner. Thousands, yes, millions, of dollars of as good profit as was ever made has been thrown away in this fashion, and few that lost it could tell where it had gone. They may know that they got back for their lumber less than the timber and sawing cost, and that their operation as a whole was a losing one, but they do not realize that the gain which would have served to turn the scale might readily have been made out of the stuff they burned up to get out of the way.

No saw-mill man can be said to have fully mastered his business until he has learned that every cent he is able to get out of stock that will not bear shipment, or sell at a profit, is so much made. It all goes to swell the profits, because the stuff must be made in order to make the good lumber of which it is the refuse. All the by-products of the saw mill have this advantage, that they are the savings from what is practically worthless, and hence their cost represents only the labor put into them after they pass the saw. It is the conversion of the useless into the valuable, and so long as the bare expense of the manipulation costs less than the value of the resulting product, there is money in it.

This is a matter which has received more attention in the pine mills than among those sawing hardwoods, for one reason because the former are large establishments as a rule, and are operated in a more scientific way. With many hardwood producers the sole problem they undertake to solve is to get a certain quantity of logs into such shape that they are marketable, and to get the money for them. Their prime object does not seem to be so much to make the largest possible profit as to

turn their investment into cash quickly. This is a condition made necessary sometimes by the limited capital available, but it rapidly grows into a habit and many never get beyond it. They begin and end their careers as saw-mill men without developing the scientific side of their business at all, being content with merely buying trees and logs, cutting them with more or less economy into boards and plank, and burning everything that will not make such lumber.

The notion is widely prevalent among such operators that small mills are incompatible with the requirements of economy, and that in order to take advantage of the chances for profit in the close utilization of material a big mill with all imaginable appurtenances is a necessary prerequisite. This is a mistake. The man cutting five or six thousand a day is just as able to take care of the waste as one cutting four or five times as much. The writer has in mind now a little single circular mill in Indiana, located at a place which it has practically created, and where there is no other business, cutting from six to eight thousand feet a day, where the principle of working up the waste is carried out in detail. Besides the regular outfit of machinery, it has a band saw for making felloes, a sawing table, a lathe for making chair legs and for turning wood into various irregular shapes, cross-cut saws, etc. The result is that no cull stock is shipped from this mill, and what is left of the slabs and edgings needs very little grinding to make it as fine as sawdust. The owners have no difficulty in realizing a good profit from rather inferior logs, and their books show that a good deal of it comes from what they save out of the waste.

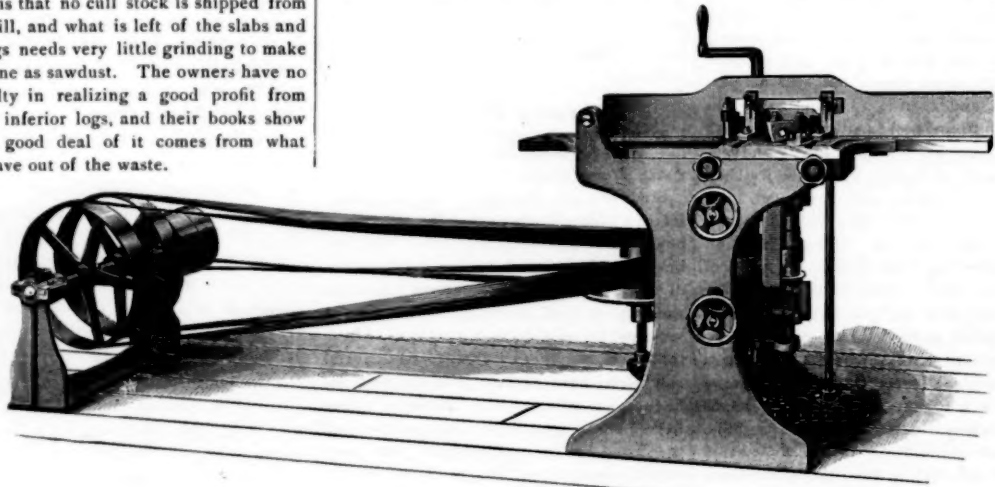
use for anything but kindling. But hardwoods of nearly all kinds can be worked up very closely, and made to yield a handsome revenue. They are used in so many shapes, and so largely in small pieces, that attention to the utilization of everything about a hardwood mill becomes of first importance. All mill owners cannot adopt the same plan, of course, but all should have some method of working the refuse into valuable by-products, as they may if they will but give the subject proper study.

When everything possible has been made in the way of small articles of wood, there will still remain something of value in the residue, the sawdust, bark and chips that go into the furnace or the refuse burner. All this is material, just as good as an entire tree, for the manufacture of the numerous products derived from the destructive distillation of wood. In several places already large works are in operation turning out such things as wood alcohol, creosote, acetate of lime, pitch, ether, wood oil and other things which sell readily and bring prices that show a large profit over the cost of making. There is an exhibit of apparatus for this work and of its products in the forestry building at the World's Fair, made by J. Mathieu, of Chicago, which shows that remarkable results can be obtained with a comparatively small investment and at little cost. Figures are given in connection with it

docks. The mill will be in operation by October 1.

A New Panel-Raising Machine.

The accompanying cut represents a new panel-raising machine built by F. Stutzman, Williamsport, Pa. It is simple in its design and substantial in its construction. The frame is cast in one piece. It will work panel on one or both sides at a time. The spindles are one and a-half inches diameter and run in self-oiling boxes, are staggered apart so as to get pressure shoes behind each head to hold the work in place and can be laterally and vertically adjusted. It can be set on any angle required, the belts pulling on boxes, not caps, a very important feature to hold spindles steady. The machine is provided with a new combination cutter-head which gives the draw-cut so as to make smooth work. The circular cutters are shaped to any required molding, and has a draw-cut of an angle of forty-five degrees. Any ordinary millman can operate this machine. The change from bevel to O. G. requires but a few minutes by changing the circle knives and not disturbing the other cutters. The machine is built with power feed; the fluted feed roll is placed right in front of the head; the delivering roll is rubber, and is placed right behind the head and is driven from the countershaft. The feed works are simple, durable



A NEW PANEL-RAISING MACHINE.

In some large mills what is ordinarily regarded as the refuse becomes the basis of a distinct business. The waste is sold by the saw-mill man at a certain price, small of course, and the buyer takes it and works it up. Every piece big enough to make a pill-box is saved and utilized, and even when the cost of the material is added a good profit remains. In many cases this plan of utilization will prove practicable and economical, relieving the millman of the details attending the working up of his refuse stock and furnishing another with the means of making money. Another way is for the mill operator to furnish the machinery and the stock and let out the job of working it up on shares or at an agreed price for the product. A shrewd, enterprising mechanic can usually be found who will gladly supply the skill, push and all needed help in keeping up the department for an interest in its results. By such methods as these and others that will suggest themselves to a practical millman, a deal of good money may be recovered from the slab pile that now represents nothing but loss to the owner. The machinery for working up wood into small shapes is not expensive, and it does not require such skill in handling as to make it difficult to secure competent men to operate it.

The hardwood millmen are fortunate in having a larger variety of by-products than pine, where they are mainly lath and pickets, small pieces of pine being of little

which indicate a profit of \$5.00 on the carbonization of one cord of wood, allowing \$2.00 as the cost of it, and a further margin if the wood tar obtained is redistilled. Using the refuse of saw mills, which could be placed in the apparatus as cheaply as in a refuse burner, the margin ought to be large enough to make the process one of value to lumber makers. Possibly all mill owners might not find it practicable or advisable to carry the utilization of their waste material to this extent, but many of them might do so to their own profit and to the general advantage of the business.

New Mill at Palatka, Fla.

Several buildings have been purchased at Palatka, Fla., by Messrs. N. J. Tilghman & Sons, who are having them put in order preparatory to putting in the machinery for a general planing mill and orange-box factory. The buildings are, respectively, 100 and 200 feet long, and the one nearest the river will be used as the millhouse. The mill will be equipped with the latest improved machinery, among which is a 12,000-pound planer. The building nearest the gas factory is to be used as the drying-room and shipping department. The timber used will be mostly pine, and will be shipped by rail from Georgia. They will have ample shipping facilities for their product, as a side-track will be laid along the entire length of the buildings, and steamers can load from their

and powerful, and cannot be clogged by shavings. Two rates of speed are provided for hard or soft wood, twenty and thirty feet per minute. A continuous frame or guide, with pressure shoes and plate, is provided to fit removed parts of panels. The new arrangement holds the panel perfectly and insures smooth and even work. A suitable countershaft with pulleys is furnished, and should be placed on the floor about eight feet back of the machine; one set of heads with bevel cutter, tight and loose pulleys nine inches diameter, four-inch face, are furnished. This machine is guaranteed to cut twenty to thirty feet of hardwood per minute.

Southern Lumber Notes.

The steamship Algonquin, from Jacksonville, Fla. to New York, took out 420,000 feet of lumber on its last trip.

The Peters Lumber Co., at Alcoa, Ala., one of the largest milling concerns of the South, suspended operations at its mill last week, owing to the low price of the Pensacola sawn-timber market and the tightness in the money market. The employees were paid part currency and balance in 90-day paper.

The largest lumber cargo that ever left Mobile, Ala., was cleared last week. It was the British steamer Honiton, for Dordrecht, Holland, with 80,396 pieces of prime pitch pine deal boards, containing 1,409,033 superficial feet, valued at \$10,725,

THE first haul of logs made by the Gulf, Beaumont & Kansas City road arrived in Beaumont, Texas, last week, and consisted of fifteen carloads for the Reliance Lumber Co. This is merely the forerunner of a vast number of logs to be delivered in Beaumont.

White pine.....	3 20@	3 25
Spruce.....	2 50@	2 55
Cypress.....	2 50@	2 55

The Mystic Mining Co., Gregg, has struck a good run of ore, but cannot work it at present, as there is too much water. Nesbitt & Palmer, Spring City, have shut down to put in a crusher and rolls. The Keystone Mining Co., Spring City, has struck over fifteen feet of ore at 115 feet; they will put in a pump and sink the shaft to 127 feet. Sherwood & Morrow, Spring City, have their new shaft down eighty-two feet and are in good luck. The Pioneer Mining Co., Spring City, is sinking its pump shaft thirty feet deeper; they will put in a forty horse-power boiler, a thirty-five horse-power engine, a 12-inch crusher and a set of rolls. M. L. Harden & Co., at Cartersville, have nearly finished

"I then undertook to devise the necessary apparatus for separating the gas from the water. The gas comes with the water from artesian wells. The water is saturated with the gas and the latter escapes upon coming to the surface, just as it does in champagne. When lighted with a match it blazes up at the mouth of the pipe and burns a foot or two down on the stream of water. It seems that the water is actually burning, when it is the liberated gas that is blazing. I devised and had constructed here three apparatuses, to be used at three wells to separate and accumulate the gas, and from these pipes carry the gas to the storage holder, of about 500 feet capacity, near the residence. The three wells supply about 1000 feet of gas in twenty-four hours, 50 per cent. of which is furnished by a new well recently sunk in the yard. This new well was undertaken principally for gas and is a three-inch well about 285 feet deep. The flow of water from this well is about a barrel a minute. The installation was completed yesterday afternoon. Last night the residence was brilliantly illuminated with twenty-three Welsbach incandescent gas burners. The supper was cooked on a gas range and I enjoyed a hot bath, the water being heated instantaneously by the natural gas. Mr. Hearne is

It is said that the Florence (Ala.) Cotton & Iron Co. will soon put the Philadelphia furnace in blast.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

† In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Attalla—Mercantile.—The Attalla Mercantile Co. has filed articles of incorporation with a capital stock of \$10,000. L. B. Whitley is president.

Birmingham.—Chas. A. Conklin, of Atlanta, Ga.; W. J. Long, of Bessemer, and H. S. Long and S. Spiro, of Birmingham, have incorporated the Spiro & Long Co. with a capital of \$2000.

Florence—Corn Mill and Gin.—John Kernachan is erecting a steam corn mill, cotton gin and press at Bainbridge.

Gadsden—Steam Laundry.—The Gadsden Laundry, reported in this issue as burned, will be rebuilt.

Geneva—Dry-kiln.—G. S. Kelly will erect a new dry-kiln.

ARKANSAS.

Hot Springs—Planing Mill.—Charles Presaly, J. M. Haycraft and C. A. Belden have started a new planing mill.

Little Rock—Stave Factory.—The Beebe (Ark.) Stave Co. will remove its stave mill to Little Rock and employ between fifty and sixty hands. Site has been secured.

FLORIDA.

Tampa—Soap Factory.—An establishment known as the Tampa Soap Works has been started.

GEORGIA.

Abbeville—Cotton Gin.—A. J. Doster will rebuild his cotton gin reported in this issue as burned.

Alexander—Gold Mines.—Gold mines are to be actively developed in Randolph county by the Goldberg Mining Co., which has just been organized with a capital stock of \$1,000,000. Contract for a 25-ton plant has been let and work will soon commence. E. P. Snow is president; Samuel Aughey, vice-president, and J. E. Fiscus, secretary and treasurer; office at No. 2 South Broad street, Atlanta.

Americus—Lumber Mills.—The Americus Lumber Co. has been formed by C. A. Epping and C. T. Hammock, and will operate a mill near Americus. Operations have commenced, and the best grade of yellow pine can be furnished in any quantities.

Americus.—A report is current that J. A. Whaley will erect a distillery.

Atlanta—Electrical Works.—John L. Gross has invented a patent electric blower and ventilator and organized a company to manufacture same.

Atlanta—Canning Factory, New Town, etc.—H. F. Starke, W. E. Johnson, L. H. Moore and Hamilton Douglas have incorporated the Henrico Land Co. with a capital paid up of \$50,000. The company proposes to build a manufacturing and residence town six miles from Atlanta. A canning factory and bicycle works are already in prospect.

Augusta—Gold Mines.—Lyman B. Goff, Henry A. Stearns, P. A. Hayes, A. T. Atherton, of Pawtucket, R. I.; J. B. Melvin, of Thomson, Ga., and Geo. R. Stearns, of Augusta, have incorporated the Georgia Mining Co. to develop gold mines in McDuffie county. The capital stock is \$30,000 with privilege of increasing to \$1,000,000.

Augusta—Packing-houses.—A large pork and beef packing establishment will be located on the outskirts of the city by Bryan Lawrence and other Augusta men.

Augusta—Land Improvements.—The Augusta Land Co. has been incorporated with Joseph O.

Matthewson, president; William C. Sibley, Wm. E. McCoy, Wm. H. Barrett and Charles Estes as directors. The company's capital stock is \$100,000, and its purpose is to improve land, etc.

Augusta—Soap Factory.—A large soap factory is to be established in Augusta by parties interested in the proposed packing-houses. Bryan Lawrence can probably give information.

Augusta—Distillery.—It is reported that N. F. White, of Monroe, N. C., will erect a \$15,000 distillery in Augusta.

Cave Spring—Mercantile.—Mrs. Julia M. Tumlin, T. E. Dickerson, F. C. Wright and others have incorporated the Cave Spring Mercantile Co. to transact a general mercantile business. The capital stock authorized is \$10,000.

Cold Water—Evaporator.—F. Marion Gaines has established an evaporator for making syrups.

Cold Water—Cotton Gin.—F. M. Thornton & Co. have completed their new cotton gin and are ready for operations.

Gordon—Excelsior Factory.—C. E. Fraseur has taken possession of the Gordon Excelsior Works and will operate same.

Gordon—Cotton Gin.—Lee, Pearson & Lee have built a new cotton gin.

Griffin—Cottonseed-oil Mill, etc.—The Griffin Oil & Fertilizer Co., a partnership business, has been organized, and has leased the oil mill, gin and fertilizer factory of the Farmers' Co-operative Manufacturing Co. J. J. Elder is the manager. The company will engage in making cottonseed oil and other seed products and guanos in their season.

Meriwether—Cotton Gin.—Captain Westbrook will erect a gin stand.

Savannah—Electric-light Plant.—The Brush Electric Light & Power Co. has obtained control of the People's Electric Light & Power Co., which recently built a new plant. An exchange of stock effected the deal.

Tallahassee—Underwear Factory.—R. C. Brightmire, of Philadelphia, Pa., will establish in Tallahassee a plant for the manufacture of hosiery and underwear.

KENTUCKY.

Adairsville—Stemmy, etc.—Frank G. Wake & Co., of Clarksville, Tenn., will erect a stemmy and handling-house in Adairsville at a cost of \$8000.

Central Covington (P. O. Covington).—The city will hold an election on September 30 to vote upon a proposition to issue \$10,000 in bonds for a water works supply. Wm. E. Heckman can inform.

Louisville—Mattress Factory.—Schupp & Schmidt will re-equip their mattress factory, which was damaged by fire.

Louisville—Broom Works.—The Louisville Broom Works, reported in this issue as burned, will be rebuilt.

Louisville—Electrical Works.—Cooper & Clarke will rebuild their electrical works reported in this issue as burned.

LOUISIANA.

Long Bridge (P. O. Moreauville)—Sugar Refinery.—The erection of a central sugar refinery is being agitated at Long Bridge.

New Orleans—Fibre Company.—The Cocoa Fibre Manufacturing Co., Limited, has been incorporated for the purpose of manufacturing all kinds of vegetable fibres. W. A. Roy is president; P. R. Angelorich, vice-president, and Fred Ernest, secretary, and the capital stock is \$10,000.

New Orleans—Grain Elevator.—The Central Elevator & Warehouse Co. has been incorporated to erect and operate grain warehouses and elevators, etc. Stuyvesant Fish is president; J. C. Welling, vice-president, and R. S. Charles, Jr., secretary and treasurer. The capital stock is \$100,000.

MARYLAND.

Baltimore—Manufacturing City, etc.—About 300 acres of land at Camden Junction, near Baltimore, has been purchased by the West Baltimore Land Co., which proposes to improve the land for a manufacturing town. Water works, electric-light plants and other conveniences will be located. Richard W. Tyler, of Washington, D. C., is president of the company; T. C. H. Vance, of Louisville, Ky., vice-president, and R. G. Rutherford, secretary and treasurer.

Baltimore—Iron Foundry.—The Patapsco Iron Co., for the manufacture of metal castings and machinery, has been incorporated by Robert R. Zell, Wm. B. O'Connor, Daniel Crook, Harry L. Zell and Wm. J. O'Brien, Jr. The capital stock is \$25,000. Foundry is now in operation.

Baltimore—Drug Company.—John T. Dowell and others have incorporated the Bromo Drug Co. under West Virginia laws. The capital stock is \$50,000.

Della—Flour Mill.—Anthony Zeiting & Son contemplate rebuilding their burned flour mill, but are as yet unable to say definitely.

Lansdowne (P. O. Baltimore)—Tile Works.—Baltimore parties have decided to build a tile factory at Lansdowne, and for that purpose will organize a \$25,000 stock company. Work will be commenced on the plant next month. C. B. Reed is interested.

Washington, D. C.—Electric-light Plant.—An isolated electric-lighting plant will be put in the Arlington Hotel.

MISSISSIPPI.

Carlsile—Cotton Gin.—E. D. Jones will rebuild his cotton gin reported in this issue as burned.

Columbus—Grist Mill and Gin.—J. Edwards will rebuild his cotton gin and grist mill reported in this issue as burned.

Thomasville—Planing Mill.—F. C. Spencer and Mrs. Livingstone are erecting a planer and dry-kiln.

West Point—Bridge.—The supervisors of Clay county will let contracts on October 2 for the erection of two new bridges, one over Houlika and one over Suqatonchee, in accordance with plans and specifications. J. W. Brady, clerk.

MISSOURI.

Aurora—Lead Mines.—Baddgett, Woodward, Perry & Morgan are at work on the development of a lead mine.

Joplin—Lead and Zinc Mine.—Mr. Parker is opening a lead and zinc mine in Newton. In three days he produced 6000 pounds jack and 1000 pounds lead.

Kansas City—Bridge.—The city will construct a new bridge on Bluff street at a cost of \$24,000. Farnsworth & Blodgett are the contractors.

Marceline—Coal Mines.—W. C. Endsley, of Kansas City; R. W. Congdon, of the same place, and C. A. Brown, of Westport, have incorporated the Marceline Coal Co. for the purpose of mining coal. The capital stock is \$50,000.

Marceline—Mercantile.—W. C. Endsley, C. A. Brown and R. W. Congdon have incorporated the Marceline Mercantile Co. with a capital stock of \$10,000.

Renick—Flour Mill.—The Renick Milling Co. will erect a new flour mill to replace the one recently burned.

Salisbury—Grain Elevator.—The Salisbury Mill & Elevator Co. will rebuild its grain elevator next spring.

Stewartville—Flour Mill.—H. C. Hughes and Morgan Tume, Jr., are erecting the flour mill reported last week.

St. Louis—Brick Works.—The Lindenwood Press Brick Co. has been incorporated with a capital stock of \$30,000, one-half of which is paid in. The incorporators are Daniel McCallister, Wm. M. Hardy, D. B. Drummond, W. A. Meller and George E. Gresler. Purpose of the concern is indicated in its title.

Verona—Flour Mill.—S. H. Veatch has purchased and will operate the Verona flour mill.

NORTH CAROLINA.

Charlotte—Sizing Mill.—F. Eastwood, of Fall River, Mass., contemplates establishing a sizing mill at Charlotte.

Charlotte—Cotton Mill.—J. H. Crowley, of Philadelphia, Pa., contemplates starting a weave mill at Charlotte.

Concord—Gold Mines.—The Buffalo Mining Co. has been chartered with a capital stock of \$12,500, P. B. Fetzer being president, and J. C. Lippard, secretary and treasurer. The company recently purchased the Barrier & Shinn property near Concord, and will thoroughly develop same. A mining plant is now being built at the mines.

Gastonia—Cotton Mill.—The Trenton Cotton Mill Co. is actively engaged in erecting its plant and pushing work on it steadily. This company was at first called the Windsor Mills.

King's Mountain—Cotton Mill.—The cotton-mill company previously reported as being organized by P. S. Baker is now building a plant. It is known as the Crowder's Mountain Manufacturing Co.

Mooresville—Granite Quarry.—A project is on foot to organize a company to operate the granite quarries near Mooresville. J. H. Carson and J. A. Johnson, of Charlotte, are interested.

Morganton—Kaolin Mines.—It is reported that Gen. R. F. Hoke has discovered valuable kaolin deposits on his property on Brown mountain.

Whittier—Saw Mill.—The Keller Lumber Co. may possibly erect a new saw mill.

SOUTH CAROLINA.

Anderson—Telephone System.—The Anderson Telephone Exchange will construct a telephone system.

Cowpens—Cotton Mill.—The Cowpens Manufacturing Co. is erecting a weave shed and will equip it with 200 looms.

Florence—Increase Capital.—The Monterey Co. will hold a meeting of stockholders on October 17 to consider increasing its capital stock from \$50,000 to \$200,000.

Greenville—Desk Factory.—The Gates Desk Co., operating a factory, has petitioned the secretary of state to extend its charter, with a capital stock of \$25,000.

TENNESSEE.

Ashtand City—Stave Mills.—Chess, Wymond & Co., of Louisville, Ky., will erect two stave mills in Cheatham county to cut the timber on 7400 white oak trees.

Clarksville—Cider and Vinegar Plant.—The establishment of a cider and vinegar plant is contemplated. W. B. Pettus can inform.

Cleveland—Coal Mines, etc.—The Chilhowee Mining & Railway Co. has been chartered for the purpose of mining coal and copper and constructing mining railroad. The incorporators are W. K. Spadden, E. T. Hall, E. F. Campbell, Samuel Reese and W. S. Tipton. Their property is at Bradley, in Bradley county.

Colliersville—Stave-head Factory.—E. K. Leake has erected a barrel-head factory and commenced operations. Its capacity daily is 10,000 barrel heads.

Harriman—Feed Mill.—O. W. Thayer has purchased machinery and will equip a feed-grinding mill.

Humboldt—Box Factory.—B. C. Jarrell & Co. are erecting a new iron building for their box factory. They employ seventy-five men.

Humboldt—Electric-light and Water Works.—It is reported that a stock company has been formed to erect an electric-light plant and construct water works.

Memphis—Gin Company.—The Pratt Gin, Hames & Plow Co. has been chartered.

Memphis—Mercantile.—The A. M. Wortham Mercantile Co. has been chartered.

Nashville—Timber Lands.—Olin H. Landreth has some good oak and chestnut timber lands, and will make favorable terms with parties desiring to cut it.

Nashville—Grist Mill.—G. W. Spotswood will rebuild his grist mill reported in this issue as burned.

TEXAS.

Austin—Iron Bridges.—Proposals to build five iron bridges for Travis county will be opened on October 3 by W. von Rosenberg, Jr., county judge.

Beaumont—Lumber Mill.—The Reliance Lumber Co. has put a new edger in its mill.

Beaumont—Rice and Grist Mill.—Price, Nash & Co. have broken ground for the erection of their grist and rice mill, and will push it steadily to completion. The structure will be 50x300 feet in size.

Beville—Broom Factory.—A plant known as the Osborne Broom Factory has been established.

Bonner—Grist Mill and Gin.—W. E. Bonney will rebuild his grist mill and cotton gin reported in this issue as burned.

Chisolm—Cotton Gin and Oil Mill.—James A. C. Howell will erect a new cotton gin and a cottonseed-oil mill.

Denton—Flour Mill.—A Mr. Dent, representing a Minnesota company, is talking with Denton parties relative to erecting a flour mill.

El Paso—Water Works.—On September 12 the taxpayers of Waco voted an issuance of \$175,000 6 per cent. bonds for building a water-works system. The mayor can give particulars.

Forney—Cotton Gin.—J. W. McCullough will rebuild his cotton gin burned near Forney.

Frost—Cotton Gin.—W. L. McCord will rebuild his cotton gin reported in this issue as burned.

Hallettsville—Ice Factory.—T. J. Wilson will rebuild his ice factory reported in this issue as burned.

Hillsboro—Electric-light and Water Works.—John D. Fredd, of Fort Worth, Texas, has contract to erect an electric-light plant and construct water works at Hillsboro.

Mertens—Cotton Gin.—The \$10,000 cotton gin lately reported was built and is operated by J. E. Cooper.

La Grange—Cotton Compress.—The La Grange Compress Co.'s new cotton compress has been completed and was put in operation on September 16. The plant is the Steers press, with a capacity of 100 bales per hour, and it cost \$48,000. John Schumacher is president of the company.

Rock Springs—Water Supply.—The Rock Springs Water Supply Co. has been chartered for purposes indicated by its name. The directors are W. P. Pullen, J. W. James, J. C. Wren, C. E.

Franks, Y. T. May and Gam Hough, and the capital stock is \$15,000.

San Antonio—Road Improvements.—The county commissioners have acted favorably upon a petition to issue \$200,000 of bonds for road purposes. Election of the Bexar county property-holders will be held on October 11.

Waco—Bridge.—The committee of the city council will decide upon a site for the new bridge this week. It is to be built across the Brazos river at a cost of \$100,000.

Woodland—Cotton Gin.—W. E. Bonner will rebuild his cotton gin reported in this issue as burned.

VIRGINIA.

Alexandria—Ice Factory.—N. J. Smith has bought G. H. Moore's interest in the Alexandria Ice Manufacturing Co. for \$5750. The plant will be thoroughly overhauled, alterations made to machinery and operations resumed.

Botetourt—Canning Factory.—J. C. Brewbaker has established a cannery and expects to increase his pack next season. This item was reported lately under Wheatland by error.

Handsom's Depot—Saw Mill.—J. T. Bradshaw, of Carrsville, has removed his saw mill to Handsom's Depot.

Petersburg—Water Works.—The city will expend \$50,000 for additional water supply, issuing bonds to pay for same. For particulars address the mayor.

WEST VIRGINIA.

Bayard—Saw Mills.—J. J. Bardollar & Son and Mr. Hughes, of Everett, Pa., have obtained 8000 acres of good timber lands at Bayard and will cut same for the market. Three first-class saw-mill plants will be built at once.

Bayard—Saw Mill.—Paw's saw mill, recently burned, will probably be rebuilt.

Charleston—Mining Gold and Silver.—The Monometallist Gold Mining Co. has been incorporated to mine gold and silver. George Davis, J. N. Carnes, J. A. McGuffin, of Sewell; F. L. Roundbush and Henry Stern, of Denver, Col., are the incorporators. The capital stock is \$6000, with privilege of increasing to \$700,000.

Elkins—Railroad Shops.—The West Virginia Central & Pittsburgh Railroad Co. is making an addition to its shops which will increase their capacity one-half. Considerable new machinery will be put in.

Kenova—Boat Company.—A charter has been issued to the Big Sandy Towboat Co. with the following incorporators: William Smiley, Geo. J. Dickson, James S. Rose, W. P. Vaughan, James Runyon and M. R. Strath, of Catlettsburg, Ky., and John L. Dearing, of Kenova. The capital stock is \$20,000.

Raymond City—Coal Mining.—The Marmet-Smith Coal & Mining Co. may put in a rope-haulage plant.

Weston—Gas Company.—The Weston Natural Gas & Fuel Co. has been incorporated with a capital stock of \$30,000.

Wheeling—Oil Company.—The Worth Oil Co.'s certificate of incorporation has been filed.

White Sulphur Springs—Tobacco-machine Company.—R. H. Wright, of New York, and Lynchburg parties have incorporated the Wright Automatic Tobacco Packing Machine Co. with a capital stock of \$250,000.

BURNED.

Abbeville, Ga.—A. J. Doster's cotton gin.

Bayard, W. Va.—Paw's saw mill.

Bonner, Texas.—W. E. Bonney's grist mill and gin.

Carlisle, Miss.—E. D. Jones's cotton gin.

Columbus, Ga.—Residence of W. R. Bedell; loss estimate \$3500.

Columbus, Miss.—J. E. Woods's cotton gin and mill.

Forney, Texas.—J. W. McCullough's cotton gin, near Forney.

Frost, Texas.—W. L. McCord's cotton gin.

Gadsden, Ala.—The Gadsden Steam Laundry.

Geneva, Ala.—G. S. Kelly's dry-kiln.

Hallettsville, Texas.—T. J. Wilson's ice factory; loss \$6000.

Llano, Texas.—Boot and shoe store of Lanning, Moore & Co.; loss estimate \$10,000.

Louisville, Ky.—The Louisville Broom Works; loss \$4500.

Louisville, Ky.—Schupp & Schmidt's mattress factory.

Louisville, Ky.—Cooper & Clarke's electrical works.

Nashville, Tenn.—G. W. Spotswood's grist mill.

Panhandle, Texas.—Union Depot; loss estimate \$10,000.

Quincy, Fla.—The Farmers' Warehouse Co.'s tobacco warehouse; loss estimate \$5000.

Schell City, Mo.—The Trout Hotel, Duck Hotel and Missouri, Kansas & Texas Railroad station; loss estimate \$25,000.

Whittier, N. C.—The Keller Lumber Co.'s saw mill has been totally destroyed by an explosion.

Woodland, Texas.—W. E. Owner's cotton gin.

BUILDING NOTES.

Atlanta, Ga.—Business Block.—G. F. Cooledge & Bro. have let the contract for a five-story building to contain offices and stores. It will have an iron and plate glass front.

Atlanta, Ga.—Building Block.—John W. Alexander will erect a four-story brick block for stores and offices, employing his own labor.

Baltimore, Md.—Hall.—The Musicians' Protective Union proposes to build a hall for concerts etc., while rooms will be set apart in the building for a library and society meetings. John W. Orem and W. H. Pindell are a part of the committee in charge. The proposed hall is to cost \$10,000.

Baltimore, Md.—Dwellings.—James Young will erect two brick dwellings on Aisquith street.

Baltimore, Md.—Dwellings.—S. D. Huft will erect ten brick dwellings at Mount Royal avenue and Cathedral street. Each is to be four stories high.

Baltimore, Md.—School.—The special committee appointed is considering two designs for the Western Female High School, which is to cost between \$80,000 and \$100,000. The materials provided for are buff brick with terra-cotta and graystone trimmings, slate and tile roof. A tower 105 feet above ground is planned. The building is to contain class and recitation rooms, gymnasium and chemical laboratories. It is to be 200 feet wide and ninety feet deep. Alfred Mason is architect. Henry A. Wise, superintendent of schools, may be addressed.

Beltsville, Md.—Church.—The church to be erected by L. A. Ellis, of Laurel, Md., at Beltsville, will be 32x45 feet and cost about \$5000.

Braddock, Md.—Hotel.—It is reported that the Frederick & Middletown Railroad Co. is interested in building a hotel for a summer resort. It will be reached by the electric railway under construction. Upton A. Sharretts, of Frederick, is vice-president of the company.

Burlington, N. C.—Church.—The Methodist Protestants will erect a frame church edifice at once.

Carthage, Mo.—Courthouse.—The plans of M. A. Orlopp, of New Orleans, have been accepted for the courthouse to be erected to cost \$100,000. It is to be 92x135 feet in dimensions. The materials will be Jasper county limestone or brick and stone. It will be three stories high and fire-proof.

Charleston, W. Va.—Residence.—M. W. Donelly will erect a dwelling of brick, terra cotta and stone with tin and slate roof. It will cost \$7500.

Charleston, W. Va.—Church.—The Southern Methodist Church will build a church edifice of pressed brick and stone to contain a Sunday-school room. It will be 50x90 feet and cost \$20,000. John Fulk is architect.

Clifton Forge, Va.—Hospital.—The Chesapeake & Ohio Railroad Co. intends to erect a hospital for railway and other patients. G. W. Sterens, general manager at Richmond, Va., will inform.

Fortress Monroe, Va.—Building.—Capt. John W. Pullman, U. S. A., will give information regarding the administration building which it is proposed to build at Fortress Monroe by the United States.

Halsey, Ky.—Houses.—G. W. Ransom, of Knoxville, Tenn., has the contract to erect 125 houses at Halsey for the Bird's-Eye Jellico Coal Co. A large frame building will also be built.

Harlan, Ky.—School.—It has been decided to erect a school, to be known as Harlan Academy, to cost about \$6000. Rev. J. T. Reagan, of the Presbyterian church, may be addressed.

Hopkinsville, Ky.—Hotel.—The hotel to be built is to cost about \$75,000. The materials will be stone and terra cotta.

Huntington, W. Va.—Hospital.—No arrangements have as yet been made for erecting the hospital for the Chesapeake & Ohio Railroad. It is contemplated, however.

Jackson, Miss.—Courthouse.—Wayne county has issued bonds to construct a \$10,000 courthouse. Address Sheriff McRae.

Joplin, Mo.—Courthouse.—The plans of W. B. Rees, of Joplin, have been accepted for the \$20,000 courthouse. It will be erected of fire-proof material and contain steel cell work for prisoners.

Knoxville, Tenn.—Block.—The business block which is being erected for Mrs. E. Haynes is four stories high and will cost \$10,000. It will have an elevator.

Mullins, S. C.—School.—The school to be built by the Mullin Collegiate Institute will cost \$1500. It will be a frame structure. A church may be built later.

New Orleans, La.—Depot.—The Texas & Pacific Railroad Co. will construct a new passenger station on Thalia street. The contract has been let and work is to begin at once.

New Orleans, La.—Office Building.—Plans are being prepared by Thos. Sully & Co., architects, for a large office building to be erected on Carondelet street. It is to be nine stories high. The first floor will be occupied by the New Orleans Stock Exchange and other floors rented to lawyers and others.

Richmond, Va.—Masonic Building.—Plans have been prepared for the proposed Masonic Home by Charles H. Reid, Jr.; they provide for a structure to cost \$35,000. A committee is now considering them. A. G. Babcock will give information.

St. Louis, Mo.—Residence.—A. B. Scannell will erect a residence of pressed brick and granite, three stories high with slate roof. It will cost \$15,000. Grable & Weber are architects.

St. Louis, Mo.—Office Building.—The Mullanphy Board has decided to build an office building at a cost of \$15,000. Charles Green, Leon Hull and Thomas Quinn are the committee in charge.

Sulphur Springs, Ark.—Hotel, etc.—The Sulphur Springs Hotel Co. will rebuild its burned hotel and contemplate erecting a number of cottages in the spring.

Tampa Bay, Fla.—Hotel Addition.—An addition is to be made to the Tampa Bay Hotel. Contract is not let as yet. Manager King can give information.

St. Louis, Mo.—Flats.—Louis Fisher, 3021 Caroline street, will build a suite of flats of pressed brick and marble, with composition roof, to cost \$6500. Julius Schira will build a suite of flats at 2712 Franklin avenue of pressed brick and stone to cost \$6000.

St. Louis, Mo.—Depot.—The Pacific Express Co. will erect a freight depot to cost about \$26,000. A. Weber is the architect.

Washington, D. C.—Storage Sheds.—Bids are wanted until September 30 for erecting storage sheds. Address N. H. Farquhar, chief of bureau of yards and docks.

Washington, D. C.—Church.—P. N. Dwyer has designed a church to cost \$80,000 for St. Paul's Catholic congregation. It is to be built of stone and the design is Gothic. Father Mackin is the pastor of the church.

Waveland, Miss.—School.—A site has been donated for a public school to be built at Waveland. C. Bodge is interested.

Williamsburg, Va.—College Improvements.—Contracts have been awarded for erecting a hospital building and dormitories for William and Mary College to cost \$7000. Carpenter & Peebles, of Norfolk, are architects.

RAILROAD CONSTRUCTION.

Railroads.

Baltimore, Md.—The Canton, Sparrow's Point & North Point Railroad Co. has been incorporated to build an electrical railway from Canton, in the eastern suburbs of the city, to North Point, at the mouth of the Patapsco river. The capital is \$500,000. Among the incorporators are F. W. Wood, president of the Maryland Steel Co., of Sparrow's Point, and W. B. Brooks, Jr., of the Canton Co. of Baltimore.

Camden, Ala.—The Montgomery, Haynesville & Camden Railroad Co. will not begin the construction of the line yet. John A. Milner, chief engineer, may be addressed at Birmingham, Ala.

Dingess, W. Va.—The extension of the Norfolk & Western in Logan county has been graded for four miles. It is to be five miles long, extending to the property of the Pearl Coal Co. from the N. & W. Ohio River branch. It is to be completed in a few weeks.

Frederick, Md.—Work on the Frederick & Middletown road, suspended for the past week, is to begin again in a few days.

Gainesville, Texas.—Surveys of the Gainesville, McAlester & St. Louis have been completed to the coal region around McAlester, I. T., and it is reported right of way is now being secured with the intention of building the road in 1894. At Gainesville it would connect with the Missouri Pacific, and at McAlester with the Missouri, Kansas & Texas.

Jackson, Miss.—It is reported that the Natchez, Jackson & Columbus, a narrow-gauge road ninety miles long extending from Natchez to Jackson, Miss., will be changed to standard gauge. It is a feeder of the Louisville, New Orleans & Texas. About twenty miles have been altered to standard gauge.

Jacksonville, Fla.—Work has begun on the electric railway projected between Jacksonville and Neptune, Fla. It will be sixteen miles long, four miles of the route being graded. A wagon road will be built in connection with it. J. F. Le Baron, of Jacksonville, will inform.

Oakland, Md.—The Mountain Lake Park Association has given \$10,000 towards building the Confluence & Oakland road, partly completed from Confluence, Pa., to Oakland, Md. It is reported that the road is to be built from Friendsville to Oakland at once by J. J. Whetstone.

Savannah, Ga.—Tracklaying on the Florida Central & Peninsular has progressed so rapidly that fourteen miles have been laid on the Savannah section, and it is expected to complete the work by December 1. This is a part of the road which will be used in the new Richmond Terminal route between New York and Florida.

Savannah, Ga.—The Georgia Central is consid-

ering the question of rebuilding the Savannah & Atlantic, a road extending from Savannah to Tybee Island, a distance of eighteen miles. The road was partly washed away by the recent storm.

Waxahachie, Texas.—It is reported that the Missouri, Kansas & Texas will build a line from Waxahachie through Navarro, Freestone and adjacent counties to Trinity, Texas, where it will connect with the Sabine River branch of the same system. The distance is about 110 miles, and there are no competing roads in the territory named.

Street Railways.

Asheville, N. C.—It is stated that the bondholders of the Asheville Street Railway Co., who have bought the franchise and property of the company, intend making extensive improvements to the line.

Atlanta, Ga.—The Atlanta Traction Co. has purchased the franchise and equipment of the City street railway system and will operate it hereafter. The new system will extend a distance of nine miles in the city and suburbs. Several connections will be made between the different lines. T. B. Felder, Jr., is president of the new company.

Hot Springs, Ark.—It is reported that an inclined railway is to be built at once. George W. Baxter can furnish information.

Kansas City, Mo.—The tracks of the Kansas City electric railway will be relaid with heavy rails and the motor cars will be rebuilt. Robert Gillham, the president, may be addressed.

Memphis, Tenn.—It is reported that the Citizens' Street Railway Co. will extend its Poplar-street line to Montgomery Park, in the suburbs. Superintendent Jones will give information.

Montgomery, Ala.—The Montgomery Street Railway Co. has been authorized by the city council to put up extra wires and poles for an electric railway.

Washington, D. C.—The Metropolitan Railway Co. has applied to Congress for permission to test an underground electric-wire system in place of the trolley. George W. Pearson is president, and W. N. De Neale, superintendent.

Washington, D. C.—A bill to incorporate the Washington & Benning Street Railway Co. has been introduced in the Senate. It provides for a line to extend from the crossing of Maryland avenue and the Benning road to the southeastern boundary of the District. W. B. Thompson and Horace J. Gray are among the incorporators. Senator Gibson, of Maryland, introduced the bill.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Cider and Vinegar Factory.—W. B. Pettus, 521 Madison street, Clarksville, Tenn., wants figures on a complete cider and vinegar plant.

Cottonseed-oil Mill.—Henry Folmar, Luverne, Ala., will be in the market soon for an 18-ton capacity cottonseed-oil mill.

Draught Tubes.—W. T. Brooks, Bogue Chitto, Miss., wants goose-neck draught for soda-water counter manufactured in quantities.

Dredging Machine, etc.—Description and prices on second-hand steam shovel and dredges are wanted by Box 25, Ocala, Fla.

Electric Motor.—The News, Chattanooga, Tenn., wants to buy a one horse-power electric motor. Address J. B. Pound, manager.

Electric-light Plant.—John D. Fredd, P. O. Box 385, Fort Worth, Texas, wants bids for the construction of an electric-light plant as a whole, or for furnishing materials.

Heating Apparatus.—The Methodist Episcopal church at Dawson, Ga., wants a heater. Address Rev. E. M. Whiting.

Laundry Machinery.—B. J. Fisher, Asheboro, N. C., wants to buy a complete hand-power laundry for a hotel.

Planer and Matcher.—J. J. Lafferty, Richmond, Va., wants to buy a second-hand planing and matching machine to take timbers six inches thick up to twelve inches wide.

Pumps.—W. T. Brooks, Bogue Chitto, Miss., wants small force pump and air pumps.

Rock Crusher.—Van Horn & Son, Richmond, Va., wants a second-hand rock crusher in good order; Gates crusher preferred.

Water Works.—Henry Folmar, Luverne, Ala., is in the market to buy a small system of water works.

Water Works.—Jno. D. Fredd, P. O. Box 385, Fort Worth, Texas, wants bids on the construction of water works as a whole, or on supplying the materials.

B. W. Fisher, Asheboro, N. C., wants to buy an iron fountain to put in hotel office.

TRADE NOTES.

THE Gleason & Bailey Manufacturing Co., of New York, has recently shipped a hose carriage to Mellette, S. D.; an elaborate hose reel to Bordentown, N. J., and some additional fire apparatus to the town of Union Course, N. Y., giving that place a complete equipment from this company.

AMONG the passengers on the new steamship Lucania was Mr. Thomas G. Clayton, of Derby, superintendent of construction of the Midland Railway of England. He comes as the guest of his brother, Mr. James Clayton, president of the Clayton Air Compressor Works, New York, and while here will visit the World's Fair and make a study of the railway systems of this country.

NOTWITHSTANDING the general depression in trade the Corbett Mill & Machine Co., of Washington, D. C., has lately closed contracts for boilers and engines and other machinery for Fred Stohman, Washington, D. C.; J. H. Noland, Lakeland, Md.; West End Steam Laundry, Washington, D. C.; Thos. Turrett, Bailey's Cross Roads, Va., and Thos. Keys, Branchville, Va.

BERGER BROS., 237 Arch street, Philadelphia, manufacture a line of hangers for plumbers', roofers' and tinners' use that are very favorably regarded by those who use them. These hangers are being largely used for outside hanging gutters in place of the usual roof gutters. Troughs can be hung very quickly with these hangers and they are neat and ornamental in appearance. Their pipe hangers and fasteners are very convenient and useful and are very popular with all who use them.

THE trend of the export trade of late with J. A. Fay & Egan Co., of Cincinnati, Ohio, is towards Africa. The wonderful development that is taking place in that remarkable region is said to be without a parallel. The South Africans are particularly impressed with American machinery, and in consequence thereof use it and order it in large quantities. The Fay & Egan people will send very shortly one of their famous No. 6 band re-saws to Algoa Bay, Gold Coast, Africa. This machine is a large and heavy one having a capacity of over 40,000 feet per day, and will be the pioneer and advance guard to the army of machines that will follow.

WATSON & STILLMAN, 204 East 43d street, New York, wrote as follows to the Leavitt Machine Co., of Orange, Mass., regarding their use of the Morse valve reseating machine: "The Morse valve reseating machine which we bought of you previous to our holiday overhauling has been used on quite a number of valves of different sizes and construction, and on careful inquiry from our engineer we find that every valve on which it has been used is now tight; and we would recommend this tool to any parties having valves in their pipes as an economical, labor-saving and satisfactory tool, as it saves a needless amount of bother and expense in keeping the valves from leaking."

THE J. H. & D. Lake Co. is now well settled in its new shops at Massillon, Ohio, which it entered in June last. This company formerly was in business in Hornellsville, N. Y., and concluding that Massillon was a more advantageous location for its business, it moved its works to that city. Its new plant occupies three acres of ground and includes a foundry, pattern shop, corerom and large machine shop. Its equipment of machinery and tools is of the latest and most improved patterns. It has recently received an order from Gaar Scott & Co., of Richmond, Ind., for two friction-clutch couplings, one of 300 horse-power and the other sixty horse-power. Despite the depression of the past few months the Lake Company has had a fair trade and orders are coming in more freely. It looks for a good fall trade.

MESSRS. GLASCOCK & CO., patent attorneys, Washington, D. C., have recently obtained a number of patents and trade-marks of more than ordinary importance for their numerous clients. Among these is a patent for an ingenious oil can granted to D. A. Lisk and T. D. Brown, of the Lisk Manufacturing Co., Canandaigua, N. Y.; one for a car coupler granted to W. McK. Hall, of Victoria, Miss.; a United States and a Canadian patent for anti-rust granted to T. D. Brown; a United States patent for car coupler granted to Henry Martin, of Campbellsville, Ky.; two patents for a valuable furnace granted to R. H. Yeoman, of Omaha, Neb.; a patent for a neck-yoke end granted to W. H. Holt, of Busti, N. Y.; a car-coupler patent granted to F. M. Cox, of Haynes, Ark., and a patent to Mrs. Jennie P. Duval, of Richmond, Mo., for a very convenient

lunch box. Among the trade-marks is one for the Massanetta Park & Springs Co., Washington, D. C.; one for H. J. McGrath & Co., Baltimore, Md.; one for the East Manufacturing Co., Buffalo, N. Y., and one for the Blue Grass Tobacco Co., J. D. Walker, president, Lexington, Ky. These are but a few of the most important patents and trade-marks recently secured by Messrs. Glascock & Co.

TRADE LITERATURE.

THE Watson Perfect Combustion Heater Co., of Toronto, Ontario, has issued a catalogue setting forth the merits of its heating system, which is now being exhibited at the Columbian Exposition in annex D of machinery hall, boiler-room extension. The company claims for its heater the following advantages: Complete combustion of smoke and gases, a maximum of heat at a minimum of cost, free and rapid water circulation and special facilities for heating furnaces and basements. The book explains the theory of constructing the furnace with illustrations of the several parts. It is shown that the heater has many scientific principles employed in its plan of construction.

THE Scott & Williams souvenir of the Columbian Exposition is a book worthy of the firm which has sent it out to the trade. It is intended, as the preface states, for the information of knit-goods manufacturers, and gives many details regarding knitting machinery which everyone interested in the products of these machines ought to know. In the souvenir are cuts of the automatic ribbed border machine, ribbed underwear machine, plain shirt machine, festoon machine, welt and slack course machine, sleeve and looper. The parts are also illustrated and described, while illustrations are given of the work accomplished. The factory is located at 2079 East Cumberland street, Philadelphia.

THE Howarth Reversible Sash & Sash Centre Co., of Detroit, Mich., has issued a catalogue which contains illustrations of its specialties and of buildings where they are used. This company seems to have secured patents on articles which, to use a stereotyped but fitting expression, "fill a long felt want." It manufactures a series of sash fittings the utility of which will be recognized at once by architects and builders generally. They can be used for the heaviest windows, transoms, etc., and are being adopted by architects of some of the finest buildings in the country. The catalogue contains illustrations showing the fittings as applied to windows in the Detroit Public Library and the J. L. Hudson building of the same city.

THE special machinery manufactured by the Silver Manufacturing Co., of Salem, Ohio, is so well and favorably known as to need little comment. Patrons and other friends of the company will note the issue of its 1893 catalogue with pleasure, as it is one of the best it has ever published. In the list of specialties described are carriage and wagon-makers' tools, butchers' tools and machines and the "Ohio" cutters and carriers. Illustrations are given of Silver's hub-boring machines, which are noted for their accuracy. There are also the hub-boxing machines, the "Star" hollow auger, spoke machines, drills, pumps, feed cutters, etc. The Silver Manufacturing Co. also makes the "Standard" horizontal engine and boiler, which can be operated by coal, wood, gas or oil, and is very compact and durable.

NEARLY 200 pages are necessary in the arrangement of the last catalogue issued by the National Machinery Co., of Tiffin, Ohio. The various products of this concern are neatly classified and well illustrated and described. The National Company makes a specialty of bolt and nut machinery, also upsetting, bending, spike, rivet, wire-nail and other machines suitable for railway shops. It is in a position to furnish complete outfits for railroad, bolt, car and locomotive shops. An unusually excellent variety of wire-nail machinery is now being made by the company. In order to meet the demands of its business it has been obliged to greatly enlarge its works and to increase its force of employees. The demand for the National rock and ore crusher which this company builds has been a notable feature of its business.

THE book which the Peck & Bennett Heating & Ventilating Co., of Cincinnati, Ohio, has recently published is a model of its kind in every respect. Not only are the illustrations and typographical work unusually good, but the descriptions are written in an interesting manner, and form a radical departure from the usual manner of getting up catalogues, which are sent out only to be hurriedly scanned and thrown aside. The book gives an outline of this company's system of heating and ventilating. Especial attention is given to the mode of heating schools and other institutions, and the Bennett-Peck system as applied to these buildings is detailed at length. A great deal of valuable information relative to hygiene of schools is published in the book, which renders it valuable as a work of reference as well as a catalogue.

New Building for New Orleans.

The New Orleans telephone exchange is to be located in new quarters. The Great Southern Telegraph & Telephone Co. has bought a site for a new building, which is to face the square bounded by Bayonne, Carondelet, Paydras and Lafayette streets. Here the company intends to erect a modern office building, with apartments for the telephone exchange and offices of the company. The rest will be rented. Mr. J. J. Fowler, the superintendent of the exchange, recently returned from a Northern trip, and while away visited the exchanges in many of the leading cities of the country, studying points in their construction and arrangement, with a view to combining the good features of all the exchanges of other cities in the new exchange. Superintendent Fowler's trip was a fruitful one, and many of his ideas will be used in the construction of the new building. As yet no plans have been prepared. The site cost \$25,000.

A Swift Morgan Line Steamer.

The new Morgan Line freight steamer El Cid, which arrived in New York last week from her first voyage to New Orleans, beat the maiden record on her outward trip, and on the return she beat all records by sixteen minutes. Her time from New York to New Orleans was four days, fourteen hours and twenty-five minutes, and from New Orleans to New York four days, two hours and fifteen minutes. El Sol comes nearest to the new flyer, with a record from New Orleans to New York of four days, two hours and thirty-one minutes, and then her sister ship, El Rio, with a passage of four days, two hours and forty minutes to her credit.

The average speed of El Cid on the way to New York was 16.73 knots per hour, while her three longest runs were 376, 450 and 381 miles a day, with an average steam pressure of 165 pounds. The total number of revolutions were 481,915, and the average per minute was seventy-six. El Cid encountered moderate weather until she reached latitude thirty-three degrees, when a northeast wind and sea delayed her progress to Cape Hatteras. The ship's speed and construction would make her an excellent transport in case of war.

Popular Excursion to the World's Fair via Pennsylvania Railroad.

On Monday, September 18, at 11.10 A. M., another one of the popular excursions over the Pennsylvania line will leave Baltimore for the World's Fair, arriving at Chicago at 12.15 noon following day. The special train will be composed of the best and most comfortable day coaches. Excursion tickets good for return passage within ten days \$17.00 for round trip from Baltimore. The Pennsylvania Railroad is the shortest and best route to the World's Fair city, and these trains afford a daylight ride through the picturesque scenery of Pennsylvania.

"Among the Ozarks."

"The Land of Big Red Apples" is the title of an attractive and highly interesting book recently issued. It is handsomely illustrated with views of south Missouri scenery, including the famous Olden fruit farm of 3000 acres in Howell county. It pertains entirely to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks, and will prove of great value not only to fruit-growers, but to every farmer and home-seeker in other States looking for a farm and a home. Mailed free. Address J. E. Lockwood, Kansas City, Mo.

\$10. Niagara Falls and Return. \$10.

The Pennsylvania Railroad announces that on September 28 they will run the last excursion of the season of 1893 to Niagara Falls at the rate of \$10.00 for the round trip. Train will leave Union Station at 8.20 A. M. and reach Niagara at 11.00 P. M. Returning, tickets will be good within five days and will allow stop off at Buffalo,

and will allow stop off at Watkins and Rochester in either direction, and will be good on all regular trains except limited express trains.

THE Cincinnati, Hamilton & Dayton Railroad has issued a handsome panoramic view five feet long of Chicago and the World's Fair, showing relative heights of the principal buildings, etc.; also a handsome photographic album of the World's Fair buildings, either of which will be sent to any address postpaid on receipt of ten cents in stamps. Address D. G. Edwards, general passenger agent World's Fair route, 200 West 4th street, Cincinnati, Ohio.

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